

VOL. 78

NO. 11

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# textile bulletin

NOVEMBER • 1952

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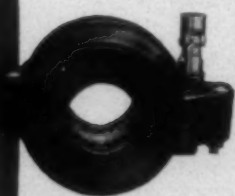
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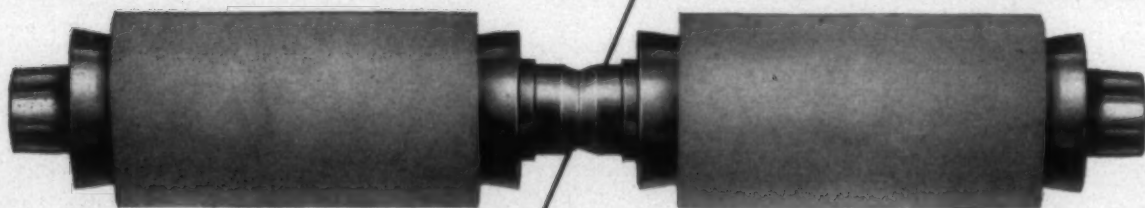
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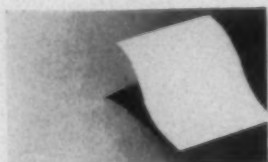
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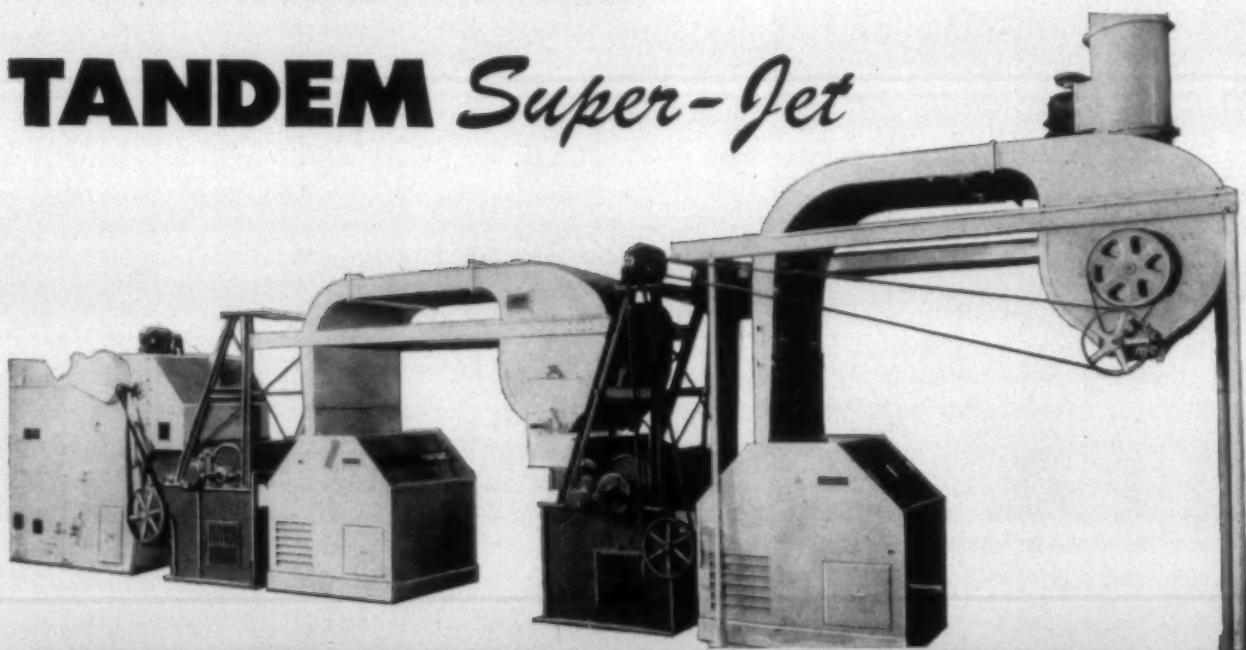
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# textile bulletin

PUBLISHED MONTHLY BY

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## The Election

Adlai Stevenson, the man whom Harry Truman hand-picked as his successor, received a bad licking, in fact, one of the worst in the history of presidential campaigns in the United States.

The C.I.O. and the A.F.L. and all the others who sought the repeal of the Taft-Hartley Law received a bad licking.

The group, composed principally of Northern white people with a few paid Negroes as a front, which sought the enactment of a compulsory F.E.P.C. law, received a bad licking.

The officeholders took the worst licking of all because a large number of them will be replaced with Republicans or will find their jobs eliminated as a measure of economy.

Harry Truman, who looked forward to being the real president of the United States, must now retire to Independence, Mo., where his effort to operate a haberdashery some years ago resulted in a failure.

In view of his cocky attitude on his "whistle stop" tours, the humiliating defeat of his hand-picked candidate must have made him realize the contempt in which he is held by the American people.

His contempt for the constitutional processes of our government, his greed for personal power, his importation of immoral Pendergast politics into the national capital, and the shady deals he made with any and every pressure group that he thought could deliver votes to him in return, and his specialty of slandering loyal Americans behind the immunity of the White House have come home to him.

Those who disagreed with him, questioned his autocratic actions, or made any criticism of his administration or of his appointees became the objects of his scurrilous epithets. A private citizen, with no effective way of replying to such

attacks from the President of the United States, was left almost without recourse.

Harry Truman openly sided against minorities who did not have many votes and took a sadistic delight in abusing the businessmen, professional people, and especially industrial management felt the lash of his sometimes obscene tongue and, whenever he could use his executive power to produce it, the rank discrimination of his bureaucratic hirings.

His conscience was apparently never troubled about truth or justice. He made a practice of flagrant misrepresentation whenever it would serve his purpose. With political success his arrogance grew until it became unbearable. The smear was his customary weapon, the red herring a tool of his trade. And because of his high position, he could, and did, take a mean advantage of anyone who incurred his displeasure.

When the Democratic Party came into power in 1933 the entire indebtedness of the United States, including the cost of World War I, was 19½ billion dollars.

When the Democrats go out of office in January, 1953, they will leave the United States with an indebtedness of over 263 billion dollars, much of it due to unnecessary expenditures, incompetence and graft.

Again it has been demonstrated that labor union leaders cannot dictate to their members how they shall vote and again it has been demonstrated that many union members desire the protection of a Taft-Hartley Law and do not feel that labor leaders should have the power to force employers to discharge them if they decide not to join a union.

The C.I.O. and the A.F.L., with the support of Harry Truman and Adlai Stevenson, chose to make the repeal of the Taft-Hartley Law a prime campaign issue and lost.

The Taft-Hartley Law may be slightly amended but the voters have refused to approve its repeal and it is now reasonably certain that it will not be repealed during the next four years.

Under the mistaken belief that advocacy of a compulsory F.E.P.C. would secure the votes of the Negroes in the Northern states, Adlai Stevenson, who previously expressed contrary views, became an ardent advocate of a federal compulsory F.E.P.C.

Stevenson made the compulsory F.E.P.C. a campaign issue but failed to carry a single Northern state in which there was a large Negro vote.

The failure of the voters, especially the Negro voters, to support Adlai Stevenson's demand for a compulsory F.E.P.C., has given the N.A.A.C.P. a setback which makes it unlikely that an F.E.P.C. law will be enacted within the next few years.

Courts are influenced by evidence of public sentiment and the failure of advocates of a compulsory F.E.P.C. to obtain votes in this election may well influence the United States Supreme Court in its decision in the Clarendon County school segregation case from South Carolina.

Both the advocates of a repeal of the Taft-Hartley Law and the enactment of a compulsory F.E.P.C. would be in a much better position today had they not made campaign issues of their proposals and seen their candidate rejected by the most overwhelming majority in the history of American presidential elections.

Governor Byrnes of South Carolina, Governor Shivers of Texas, Senator Byrd of Virginia and other Southern leaders, who refused to follow Adlai Stevenson when he advocated

**PROGRESS REPORT #3** in a series of pages published by Ciba to acquaint industry and the public at large with its expanding facilities for production and service.

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1. Possesses good tinctorial properties.
2. Levels well.
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4. Has very good affinity for wool whether applied in an acid or neutral dye bath.

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2. Dyeing of yarn and piece goods as well as for unions and nylon.

It is suitable for application printing and for producing dischargeable ground shades.

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**Cloth Fast Brilliant Red 3BW** produces economical brilliant red shades with good all-round fastness on wool, silk and nylon. Because of its wet fastness properties and brightness it should be of particular interest to the raw stock dyer faced with dyeing reworked stock. The dyeings are . . .

1. Fast to carbonizing.
2. Stable to chrome.
3. Are not affected by prolonged boiling.

This product can be used for shading chrome colors and its very good fastness to chlorine makes it suitable for use on carpet yarns.

Cloth Fast Brilliant Red 3BW is readily soluble and has very good affinity for wool when dyed neutral. Acetate and viscose rayon effects are reserved in neutral dyeing as well as from an acid dye bath. It also has good affinity for nylon from a slightly acid bath.

Cloth Fast Brilliant Red 3BW is suitable for . . .

1. Application printing on wool and silk.
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# CIBA

## EDITORIALS

such measures as the repeal of the Taft-Hartley Law and the enactment of a compulsory F.E.P.C. law, have advanced in public esteem and will long be affectionately remembered by the people of the South.

Governor Talmadge of Georgia and many others like him, who for the sake of party loyalty, surrendered to the so-called Democratic Party although it advocated measures in which they did not believe, may never again be highly regarded.

Alabama, Mississippi and Louisiana, which in 1948 led the fight against the F.E.P.C. and for states rights, evidently decided that party loyalty was more important than principles and meekly voted to have yokes of the Northern big city bosses again placed upon their necks.

Alabama, Mississippi and Louisiana were lions in defending the South in 1948 but deserted their principles and became as meek little lambs in 1952.

They were among the few who dared defy Truman in 1948 but in 1952 were among the few who followed him and his hand-picked candidate for president.

We shall shed no tears over the defeat of Senator Henry Cabot Lodge, Republican of Massachusetts, or Senator Blair Moody, Democrat of Michigan, as we regard them as the No. 2 and No. 3 haters of the South. Senator Humphrey of Michigan is entitled to the No. 1 position in this respect.

Some of the states which will cast their electoral votes for the Democratic candidate are the very ones which were almost chased out of the Democratic convention at Chicago.

Dwight D. Eisenhower, an able and patriotic man, has won the position of President of the United States but his road ahead will not be easy.

Truman and his gang have given our country an astronomical debt of \$263,000,000,000 and are handing to Eisenhower a badly mismanaged war in Korea.

Eisenhower is not a superman, and while he will give his best to his country, we doubt that any man has enough ability to solve all the problems which will be handed to him.

## U. S. Population

The Census Bureau estimates that the population of the United States Sept. 1, 1952, was 157,505,000.

That was an increase since the general census in April, 1950, of 6,373,000 or 4.2 per cent. The increase indicated a yearly growth of 1.7 per cent, the Census Bureau said, compared with 1.4 per cent a year in the decade from 1940 to 1950.

These figures indicate that the population of the United States is increasing faster than the number of spindles and looms.

## Man of the South

The Atlanta magazine *Dixie Business* did well when it named James C. Self of Greenwood, S. C., as the "Man of the South" for 1952.

From a small beginning and without previous manufacturing experience, Mr. Self has developed a very large and successful textile industry at Greenwood, S. C., and Ninety-Six, S. C.

A man of exceptional business ability and with the in-

stincts of a merchant, Mr. Self has always been alive to the necessity of keeping his manufacturing equipment up-to-date.

He has also had a genuine interest in the welfare of his employees and the homes which he provided for his employees have been models for others to follow.

We congratulate *Dixie Business* in having made a well justified selection in naming the "Man of the South" for 1952.

## Rejected, Dejected T.W.U.A.

Recent National Labor Relations Board union representation elections show that two more textile manufacturing plants have rejected the Textile Workers Union of America, C.I.O., by substantial margins.

Plant	Against T.W.U.A.	For T.W.U.A.
Efird Division, American and Efird Mills, Albemarle, N.C.	552	369
Dalton Candlewick Yarn Co., Dalton, Ga.	152	69

Meanwhile, the United Textile Workers of America, A.F.L., continues to chew away at the C.I.O. textile union.

Plant	U.T.W.A.	T.W.U.A.	No Union
Dan River Mills, Danville, Va.	7,689	278	1,624
Minneola Plant, Cone Mills Corp., Gibsonville, N. C.	273	16	202

The A.F.L. textile union also has arranged "back door agreements" to represent the workers at Aleo Mfg. Co., Rockingham, N. C., and Danville (Va.) Knitting Mills, where C.I.O. contracts had expired.

Before George Baldanzi took his celebrated walk from the C.I.O. family circle to become a member of the A.F.L.

## Worth Thinking About

### STARTLING TAX FACTS

In some cases, taxes exceed the value of the products! But more important are the exorbitant taxes levied against all people on milk, bread, and other daily necessities of life.

 <b>CIGARETTES</b> Tax .12 Value .09 Price .21	 <b>MILK</b> Tax .09 Value .11 Price .20
 <b>BEER</b> Tax .32 Value .08 Price .70	 <b>GASOLINE</b> Tax .11 Value .18 Price .29
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 <b>TRAVEL FARE</b> Tax 7.00 Value 17.00 Price 24.00	

REPRESENTS AVERAGE OVERHEAD TAXES AND PRICES.

## TEXTILE INDUSTRY SCHEDULE

— 1952 —

- Nov. 25—A.S.T.M. COMMITTEE E-11 ON QUALITY CONTROL OF MATERIALS, Philadelphia, Pa.
- Dec. 1-2, 4-5—Overseers seminar, NATIONAL ASSOCIATION OF WOOL MANUFACTURERS, Chattanooga, Tenn.
- Dec. 1-6—NATIONAL EXPOSITION OF POWER AND MECHANICAL ENGINEERING, Grand Central Palace, New York City.
- Dec. 3-5—A.M.A. CONFERENCE ON MANUFACTURING, Hotel Statler, Cleveland, Ohio.
- Dec. 3-5—CONGRESS OF AMERICAN INDUSTRY, NATIONAL ASSOCIATION OF MANUFACTURERS, New York City.
- Dec. 4-5—COATED FABRICS DIVISION, SOCIETY OF THE PLASTICS INDUSTRY, Commodore Hotel, New York City.
- Dec. 6—SOUTH CENTRAL SECTION, A.A.T.C.C., Hotel Patten, Chattanooga, Tenn.
- Dec. 8-9, 11-12—Overseers seminar, NATIONAL ASSOCIATION OF WOOL MANUFACTURERS, Atlanta, Ga.

— 1953 —

- Jan. 19-22—PLANT MAINTENANCE SHOW, Cleveland (Ohio) Auditorium.
- Jan. 26-28—Annual meeting, NATIONAL COTTON COUNCIL OF AMERICA, Dallas, Tex.
- Jan. 26-30—INTERNATIONAL HEATING AND VENTILATING EXPOSITION, International Amphitheatre, Chicago, Ill.
- Feb. 3—AMERICAN ASSOCIATION OF TEXTILE TECHNOLOGISTS Symposium, Hotel Statler, New York City.
- Feb. 9-11—A.M.A. CONFERENCE ON MARKETING, Hotel Statler, New York City.
- Feb. 16-18—A.M.A. CONFERENCE ON PERSONNEL, Palmer House, Chicago, Ill.
- Feb. 18-20—COTTON RESEARCH CLINIC, General Oglethorpe Hotel, Savannah, Ga.
- March 2-6—A.S.T.M. SPRING MEETING AND COMMITTEE WEEK, Detroit, Mich.
- March 26-28—Annual convention, AMERICAN COTTON MANUFACTURERS INSTITUTE, Palm Beach Biltmore Hotel, Palm Beach, Fla.
- April 8-10—A.M.A. CONFERENCE ON MANUFACTURING, Hotel Statler, New York City.
- April 20-23—A.M.A. PACKAGING CONFERENCE AND EXPOSITION, Navy Pier, Chicago, Ill.
- April 22-23—Spring meeting, THE FIBER SOCIETY, New Orleans, La.
- April 23-25—Annual convention, COTTON MANUFACTURERS ASSOCIATION OF GEORGIA, Boca Raton (Fla.) Hotel and Club.
- April 24—TEXTILE QUALITY CONTROL ASSOCIATION, Clemson, S. C.
- May 7-9—Annual convention, PHI PSI TEXTILE FRATERNITY, Penn-Sheraton Hotel, Philadelphia, Pa.
- May 11-16—NATIONAL COTTON WEEK.
- May 13-15—NORTH CAROLINA STATEWIDE INDUSTRIAL SAFETY CONFERENCE, Robert E. Lee Hotel, Winston-Salem.
- May 14-16—Annual outing, CAROLINA YARN ASSOCIATION, The Carolina, Pinehurst, N. C.
- May 18-20—A.M.A. CONFERENCE ON INSURANCE, Hotel Statler, New York City.
- May 28-30—Annual convention, SOUTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION, Sea Island, Ga.
- June 17-19—AMERICAN MANAGEMENT ASSOCIATION CONFERENCE ON GENERAL MANAGEMENT, Hotel Statler, New York City.
- June 18-20—Annual convention, SOUTHERN TEXTILE ASSOCIATION, Mayview Manor, Blowing Rock, N. C.
- June 29-July 3—Annual meeting, AMERICAN SOCIETY FOR TESTING MATERIALS, Chalfonte-Haddon Hall, Atlantic City, N. J.
- July 26-31—INTERNATIONAL EXPOSITION OF FABRICS, FIBERS, FINISHES AND YARNS, Waldorf-Astoria Hotel, New York City.
- Sept. 10-11—Fall meeting, THE FIBER SOCIETY, Lowell, Mass.
- Sept. 17-19—National convention, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Conrad Hilton Hotel, Chicago, Ill.
- Oct. 14-24—INTERNATIONAL EXHIBITION OF TEXTILE MACHINERY AND ACCESSORIES, Belle Vue, Manchester, England.
- Oct. 15-16—Annual meeting, NORTH CAROLINA TEXTILE MANUFACTURERS ASSOCIATION, The Carolina, Pinehurst, N. C.

— 1954 —

- April 26-May 1—AMERICAN TEXTILE MACHINERY EXHIBITION, Atlantic City (N. J.) Auditorium.
- June 10-12—Annual convention, S.T.A., Ocean Forest Hotel, Myrtle Beach, S. C.
- Annual convention, A.A.T.C.C., Atlanta, Ga. (Dates not yet selected.)

## EDITORIALS

clan, the United Textile Workers of America bargained for just about 25,000 workers in the South. In the last four months it has taken 6,000 from the opposition, and by next Spring, according to George, the U.T.W.A. will get an additional 25,000 at least. If this last estimate is 75 per cent correct, the two unions will be of almost equal strength in the South, each bargaining for some 45,000 workers.

The current and relative success of the A.F.L. textile union, as we have pointed out before, ain't the kind of thing we would give a party to celebrate and grin about. Officials of the rival unions are obviously devoted more to their own ends than to those of textile mill workers. They want members because members pay dues, and dues pay salaries of union officials.

The union rivalry will have just one result—increased friction between the workers and management in the Southern textile industry during coming months. The U.T.W.A. has announced that before the end of this year it will file petitions with N.L.R.B. for elections in plants employing a total of 13,400 workers. Already, petitions have been filed for elections at Sterling Cotton Mills at Franklinton, N. C., Cone Mills' Tarbardrey Plant at Haw River, N. C., Cone's print works at Greensboro, N. C., Erwin Mills' plant at Neuse, N. C., and Fieldcrest Mills' plants at Leaksville, Draper and Spray, N. C.

(Note: For the record, neither union received a majority in an election at Cone's Granite Plant at Haw River, so there will be a runoff; while the A.F.L. won elections at Erwin's plants at Cooleemee and Durham, N. C., it lost a runoff to the C.I.O. at the Erwin, N. C., plant of Erwin Mills.)

## The Textile School Conclave

Approximately 200 graduates and former students of the School of Textiles at North Carolina State College attended the Third Annual Conclave of the School of Textiles, Oct. 24 and 25.

The prime purpose of the Conclave is to acquaint the graduates and former students with the latest developments in textile manufacturing processes and the Third Annual Conclave featured an exceptionally fine group of addresses.

To our mind, however, the greatest benefit will always come from the personal contacts of those who attend and the private discussions and the exchanges of information based upon experiences.

As the years pass, we believe that those who attend the annual conclaves and acquire the information which is available there will advance more rapidly in the industry than those who stay away.

The information which an overseer, superintendent or manager secured at the annual conclave will make his services more valuable to the mill by which he is employed and will fully justify his absence for one or two days.

Margaret, we notice, is now parting her hair on the right. This is the first known move made by any member of the family in that direction within the last six years or so.—*Commercial Appeal*, Memphis, Tenn.

Hear about the man who lost control of his car? He taught his wife and son to drive.—*Batesville (Ark.) Guard*.



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for those cold Maine winters

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Edwards Division, Bates Manufacturing Company, Augusta, Maine.  
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• Moisture condensation is a terrific problem even in the South, where winters are fairly warm.

But the warm and humid weave shed shown here has to operate during winters that range down to minus ten. Zero weather is common. Second-rate insulations don't have a chance because moisture almost always manages to work its way past the vapor barrier—into the insulation.

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Each of the tiny dead-air cells acts as an insulation pocket to check heat flow, and the glass wall around each cell provides an effective moisture barrier.

For all of this, FOAMGLAS has amazing compressive strength; up to 9 tons per square foot when properly installed. This great strength allows you to use FOAMGLAS for core wall construction (as they are doing here), for roofs, or under a concrete slab in the floor.

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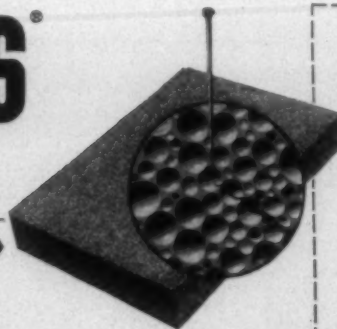
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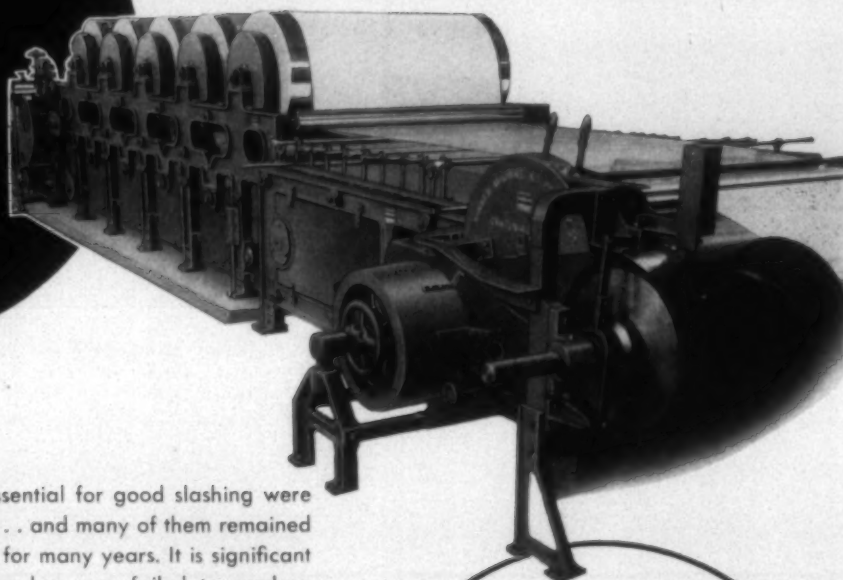
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Most of the features now considered essential for good slashing were first pioneered on Cocker built slashers . . . and many of them remained exclusive features on Cocker equipment for many years. It is significant that no new feature on Cocker Slashers has ever failed to produce results exactly as claimed.

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Also made in 5- 7- and 11- Cylinder Models for special purposes.

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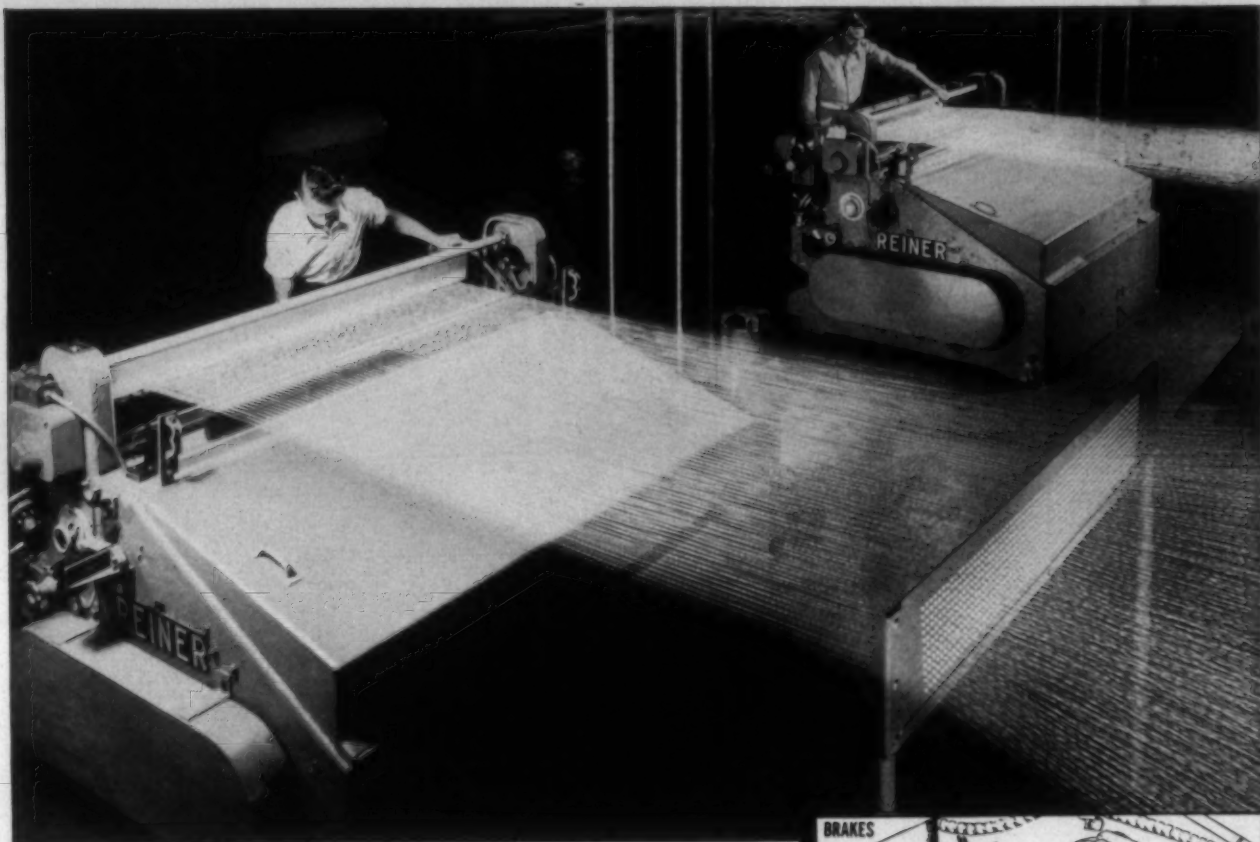
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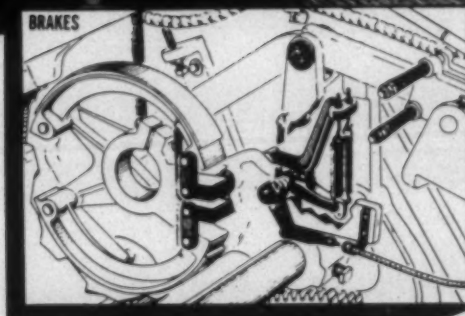
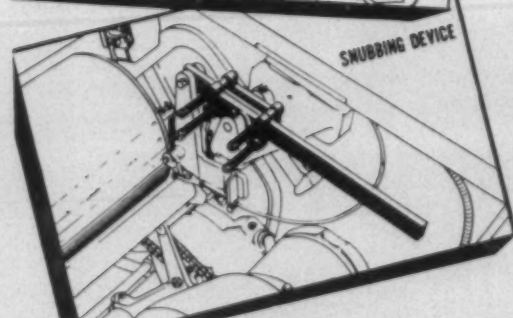
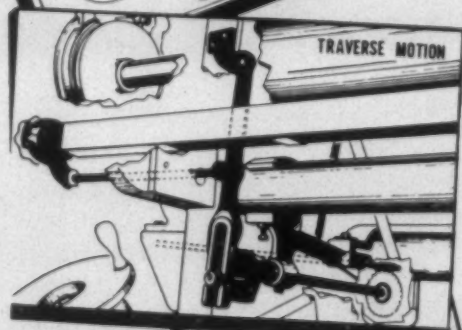
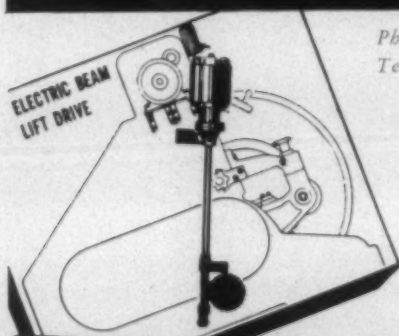
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designed to warp a fine delicate yarn at high speed without any undue strain on the yarn. It is built for beaming filament rayon, nylon, spun rayon, cotton, woolen, worsted, linen, acetate, etc. A fully illustrated catalog—yours for the asking—acquaints you with the most important features of this reliable and economic warper.

Reiner warping equipment is performing in more mills today than ever before. More than 20 features stress modern design, ease of handling, speed with safety, higher and more economical production. Write for details.

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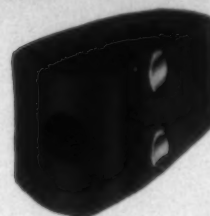
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Photographs taken in 1/20,000 second on a Draper X2 Loom at 175 picks per minute.

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Follow thru*

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Gives you this NEW  
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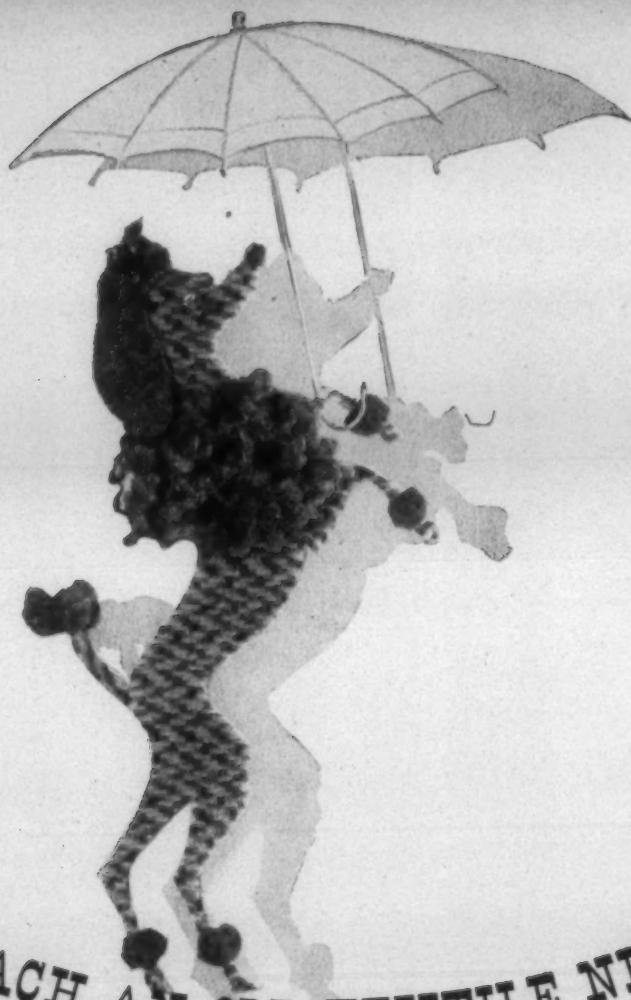
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**AT YOUR SERVICE.** Our Engineering Department at Uxbridge will gladly study your slasher room problems, and consult on ways to increase and improve production — at no obligation to you. We guarantee there will be no sales follow-up unless you specifically request it.

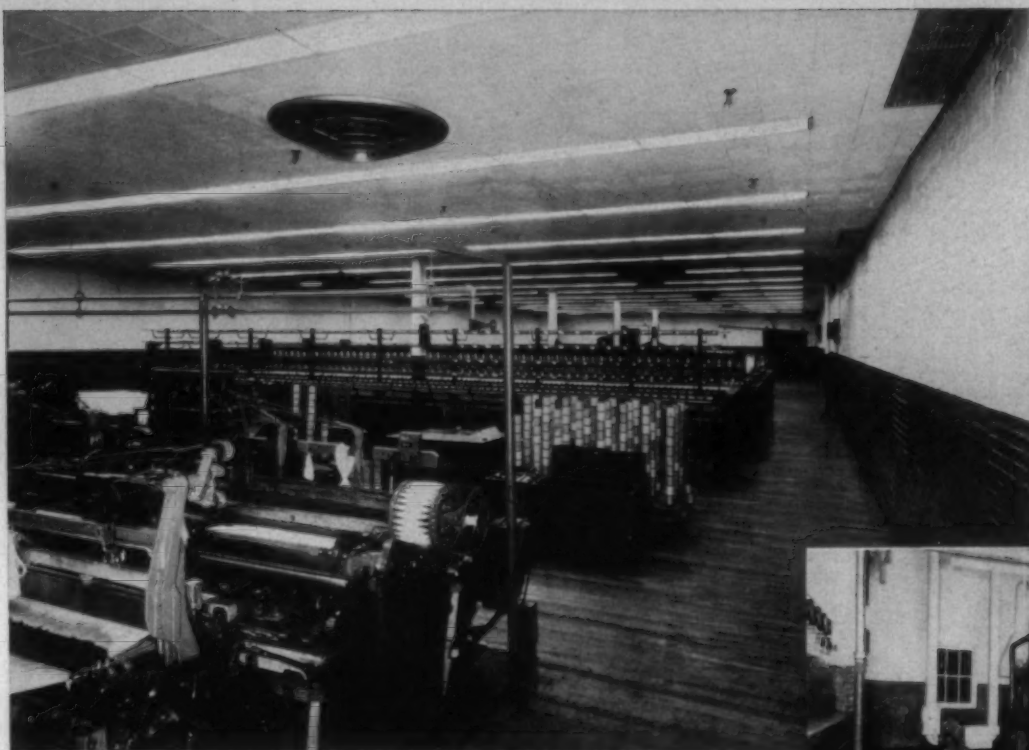
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... synthetic fiber research at its best!

Amco Central Station Air Conditioning meets Pepperell's exacting specifications for control of temperature, humidity, air cleanliness.

When Pepperell Manufacturing Company built their "miniature mill" at Lindale, Georgia, they set out to produce a nearly perfect pilot plant for test operations with the newest synthetic textile fibers. To maintain complete atmospheric control the year-round, they had Amco install central station air conditioning with refrigeration and electrostatic air filtering. Accurate, adjustable control of temperature and humidity assures the exact conditions required for any given pilot operation. All ducts are hidden for neat appearance and easy housekeeping.

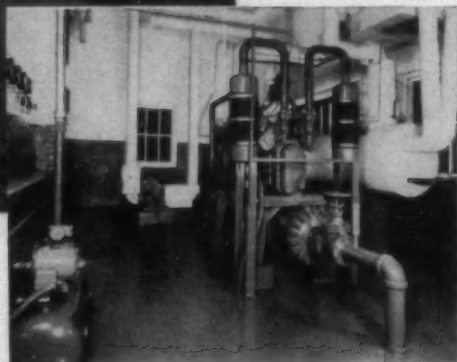
Of course, it isn't always practical, or desirable, to "streamline" a plant like this. Your plant — like many mills — may already have a modern, efficient humidification system. You can easily add COOLING with an Amco ductless system — without discarding anything, and by making only modest alterations.

Amco systems give you a choice of humidification, evaporative cooling (central station, dry duct, or ductless types) or refrigeration, alone or in combination. You can rely on Amco to give you advice on the system best suited to your needs. Call an Amco engineer.

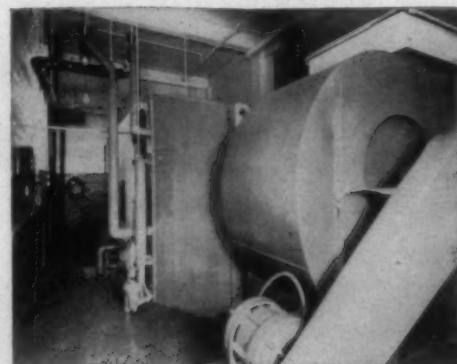
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AIR CONDITIONING SYSTEMS since 1888

Humidification • Evaporative Cooling (Ductless or Central Station) • Refrigeration



*At the heart of the pilot plant is this air conditioning equipment room — containing compressors, water chiller and cool water circulating pump.*



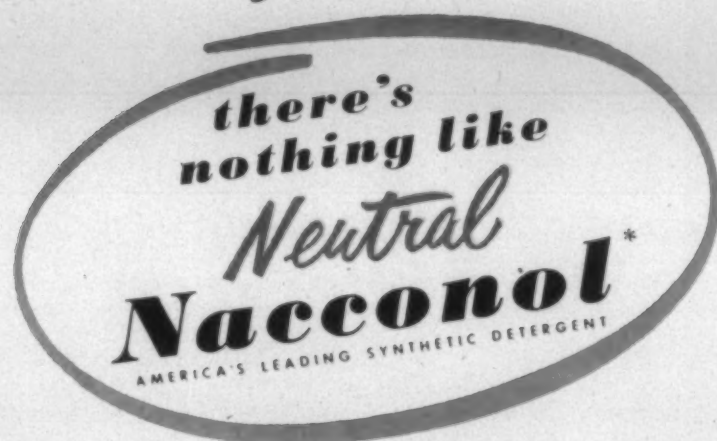
*Apparatus room contains air blower and washer*

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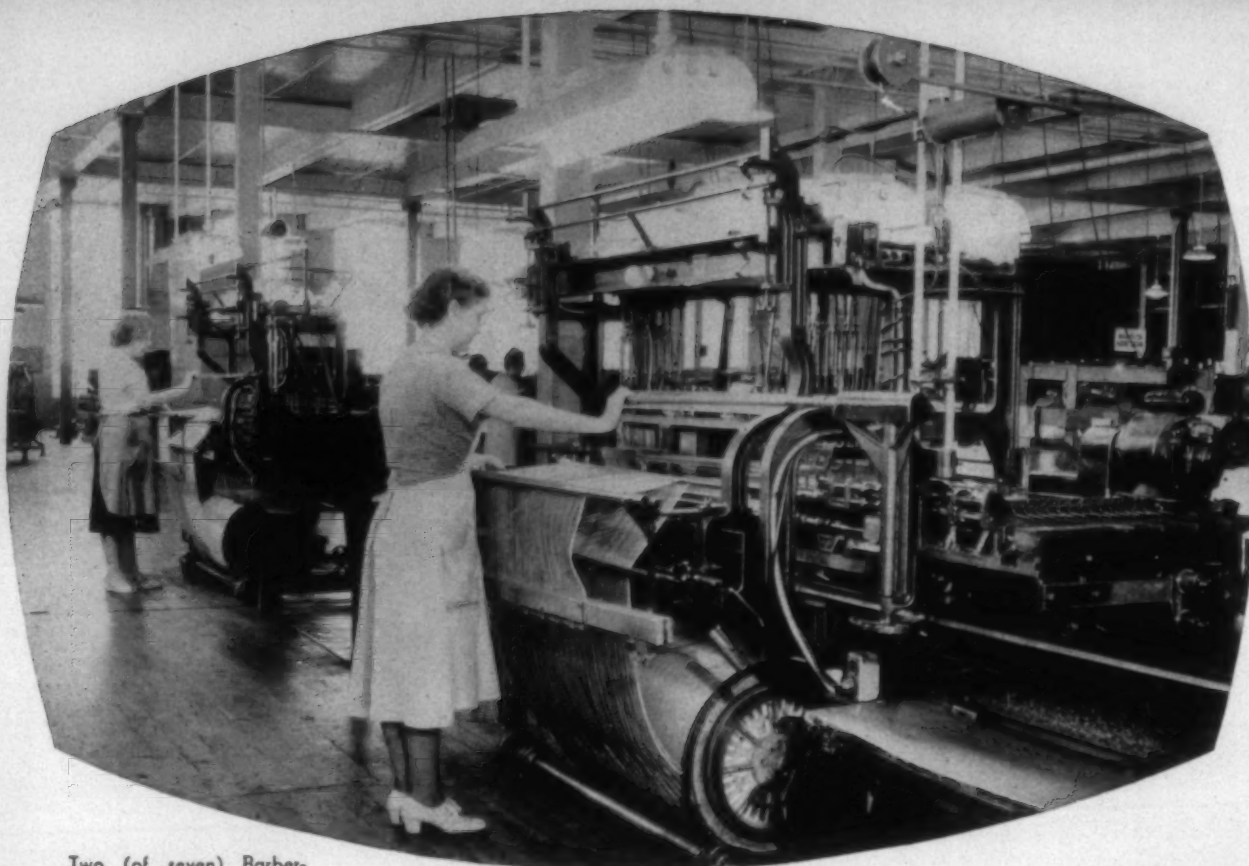
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In a mill where patterns are changed frequently, the speed, accuracy, and versatility of Barber-Colman machines are the basis of a good investment. These machines provide rapid warp renewal for straight or complicated draws with equal efficiency, draw plain or multi-colored warps, perform single or double draws on one or two sheets, and work from either a leased or flat sheet. The reed, harness, and drop wires are all drawn simultaneously. The machines shown above are delivering around 9 warps a day of cotton stripe material that runs 2884 ends, 67 sley, employs a straight draw, uses 6 harness, 4 banks of drop wires, and is drawn at 200 picks per minute.

AUTOMATIC SPOOLERS  
SUPER-SPEED WARPERS  
WARP TYING MACHINES  
WARP DRAWING MACHINES

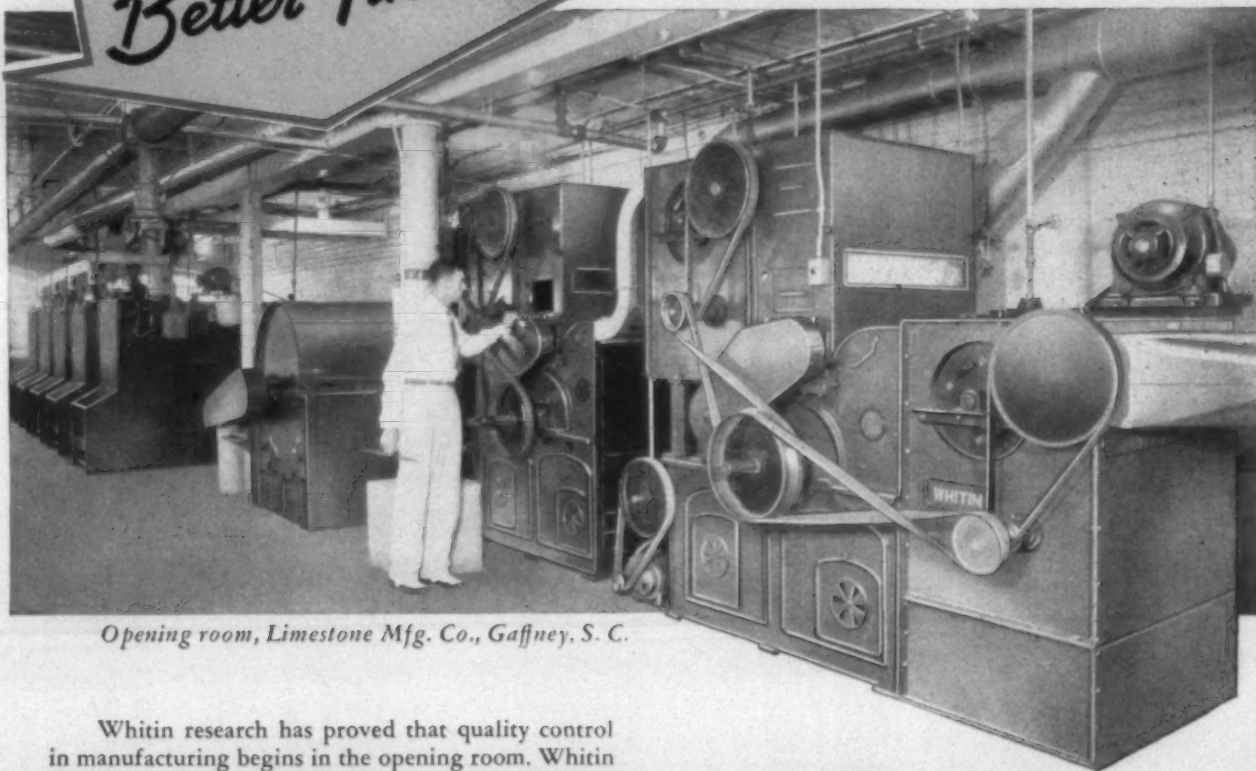
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Good Start  
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Better Finish**

# Quality starts with **WHITIN** Opening Machinery



*Opening room, Limestone Mfg. Co., Gaffney, S. C.*

Whitin research has proved that quality control in manufacturing begins in the opening room. Whitin machines have been perfected for better opening, blending and cleaning. You can cut processing costs and improve product quality by installing modern Whitin opening equipment.

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#### **SPIRAWHIRL BUCKLEY CLEANER**

The Spirawhirl is an indispensable machine for opening and cleaning all types of cotton without damage to the fibers. The amount and character of the waste removed by the eight adjustable grid bar sections is easily controlled. Recommended production is up to 1000 lbs. per hour.

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*For more detailed information, consult your nearest Whitin representative, or write to the Advertising Dept., Whitinsville, Mass. for descriptive catalogs.*

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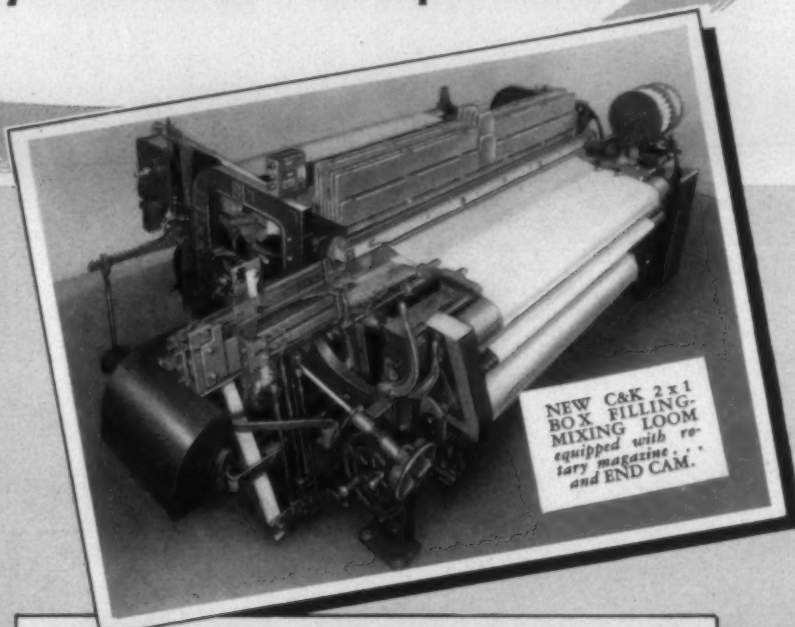
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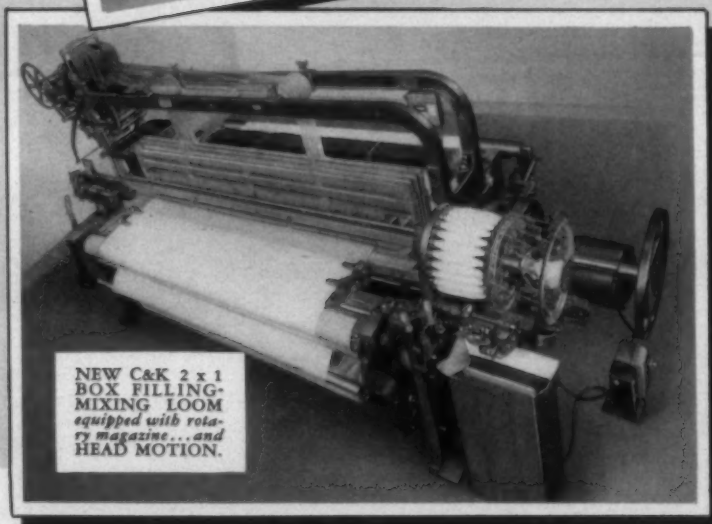
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BOX FILLING-  
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This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics

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# Amanthrene

**NAVY BLUE BN**

*in paste or powder form*

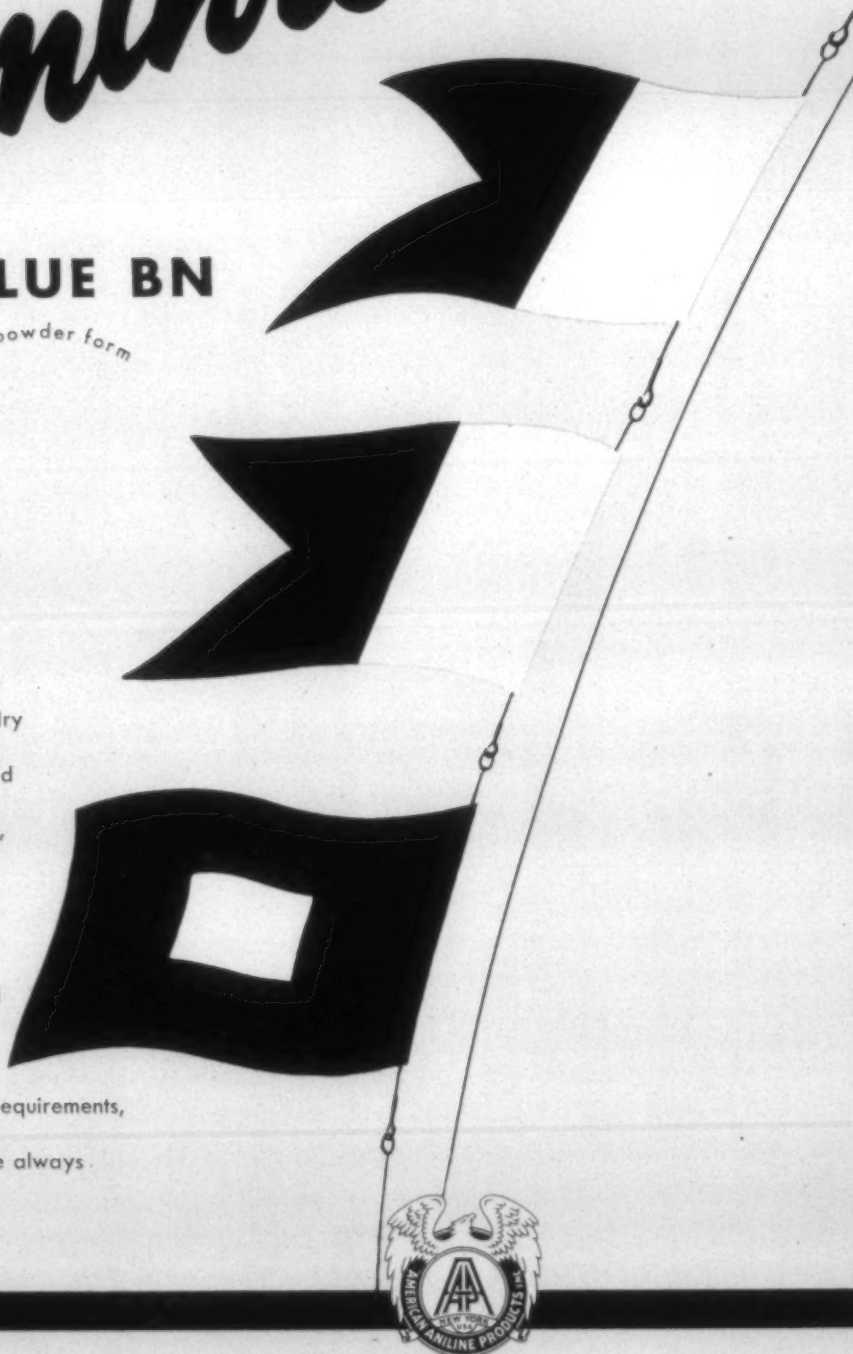
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An all purpose Vat Navy Blue ... specially  
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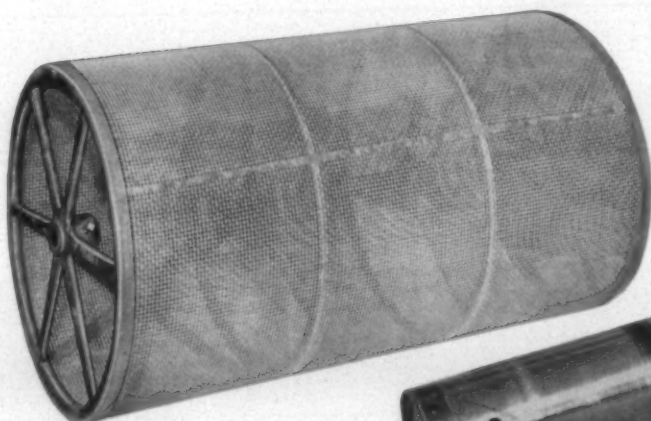
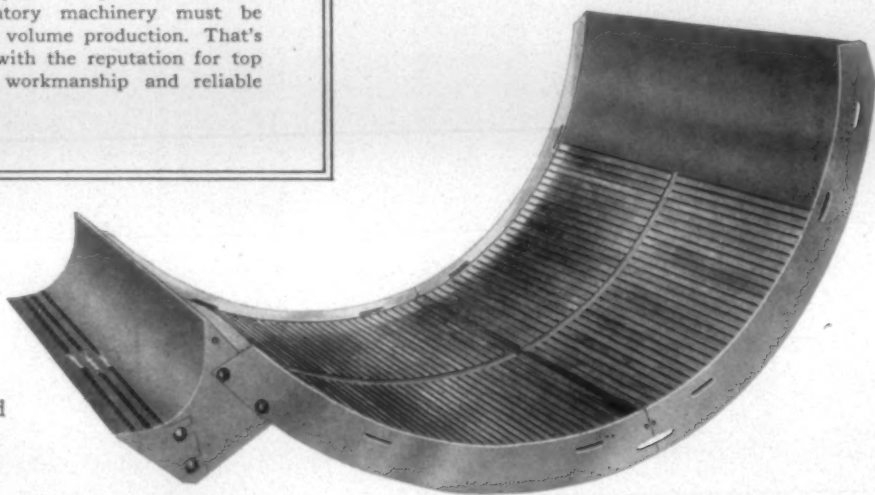
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The quality and the profit of your end product starts at the beginning—where preparatory machinery must be geared for efficient, economical volume production. That's our job—a job for specialists with the reputation for top quality products, painstaking workmanship and reliable service.

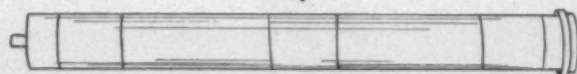
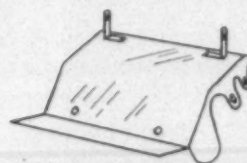
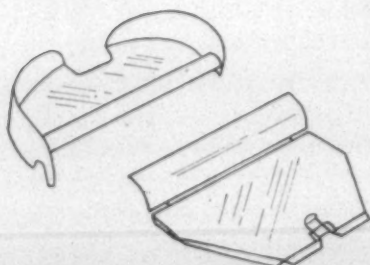
Standard type rib or perforated Card Screens are precision built on special jigs. Every screen is inspected and double checked for accuracy and tolerance.



Picker, Condenser and Waste Machine Screens of maximum strength and durability are constructed of the best materials available.



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the hands of skilled workmen  
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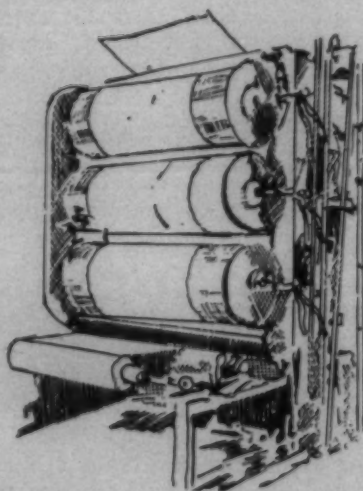
# suntone<sup>\*</sup> pigment pad dyeing colors

**New, High-Quality Dyeing Results**—Suntone Pigment Pad Dyeing Colors were research-developed by Warwick, America's leading textile chemists—and released to the trade only after these colors proved themselves to be superior.

**New Simplicity and Economy**—These colors were developed for conventional dyeing equipment such as two or three bowl padder. Now you can get exceptionally fine dyeing results with the simpler, more economical pad dyeing method.

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1. Exceptional light fastness even in very light shades.
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4. Brightness of shade characteristic of pigment colors.



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7. Controllable finish, from soft to fairly crisp handle.
8. Easy affinity of any additional finishing treatment you require.

Suntone Pigment Padding Colors are ideally suited to plain dyeing of **Cotton Goods**. Extremely level (no cross-dyeing effects) on **Synthetics** and mixtures of synthetic fibers, such as orlon, nylon-ormon, seersucker and rayon-nylon construction.

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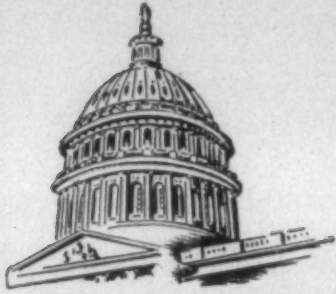
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\* ®



# WATCHING

# WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Eisenhower is wiping the slate clean, without entanglements with Truman policies, for a wholly new start on Jan. 20. Most of his major policies will not be made known until that time. It's a clean break, and end of the New-Fair Deal, based on realization the election's outcome is the most stunning rebuke and repudiation ever administered to a president.

Eisenhower forces interpret the election as indicative that more people voted against something than ever before, especially in Southern states. Housewives struggling with high prices and inflated dollars registered resentment of corruption, with its mink coats and Florida junkets. Workers gave disapproval of union exactions to help pay costs of Truman whistle stopping, and barging into the Chicago convention. They see the greatest protest vote on record.

Surprise was voiced across the whole country at the great majority rolled up against Stevenson. Political observers say it was far more than he deserved. He showed himself a man of ability and integrity, and, they say, his was a brilliant campaign. They see much of the top-heavy vote as against Truman, with Stevenson catching it on the rebound. If Truman had been the nominee they believe the result would have been far worse.

Relations between Truman and Stevenson in the latter stages of the contest were virtually non-existent. Truman went his own way, said to have been wholly financed by C.I.O., and A.F.L. He drew no money from Stevenson quarters.

With Truman drawing his funds from labor union sources, Stevenson could find no way to keep him out of the campaign. He intended to do this, but Truman at the outset said he was "running the campaign," meaning all of it. Stevenson was not consulted on Truman's whistle stops; he was pushed aside, or used as a cat's paw. The report is that only one luncheon, two telephone calls and two letters passed between them during the campaign.

Resurgence of the Southern states against Truman policies made leaders in both parties gasp at its force and extent. Republicans called it the rise of a two-party system; Democrats said it was a revelation to those who sought to kick Southern states out of the Chicago convention that they do have somewhere to go if they want to.

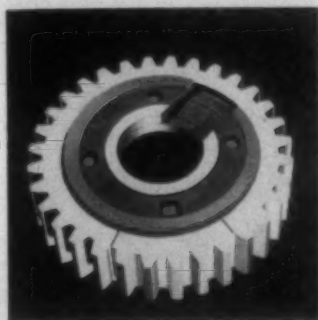
Southern spokesmen were quick to point out that if Russell had been the nominee, his electoral vote would probably have more than doubled Stevenson's. They say he would have carried such states as Delaware, Maryland, Kentucky, Oklahoma, New Mexico, Arizona and Nevada, and retained control of Congress.

Control of Congress by the dubious margin of one in the Senate, and a few in the House, will make Eisenhower dependent on a coalition in policy-making measures. While Democrats are pushed out of committee chairmanships, they are in almost as much control as they have ever been. Southerners believe that because Eisenhower carried some of their states, he's entitled to a coalition, and intend to work with him on spending bills and national defense.

Taft will be the major policy maker on the Senate Republican side, with George, Russell, Byrd and McCarran pacing him all the way. With Lodge defeated,

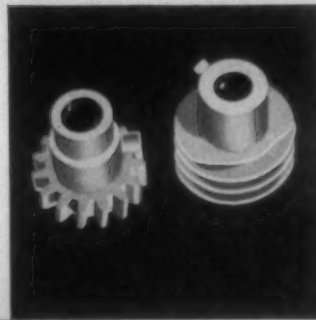


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CRANK SHAFT GEAR, a machine cut gear that is split (or Batex) for easy installation.

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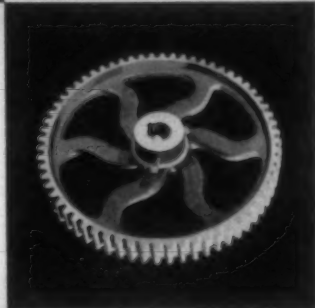
CLOTH ROLL GEAR and WORM. Steel hardened and ground bore. Lasts the life of the loom.

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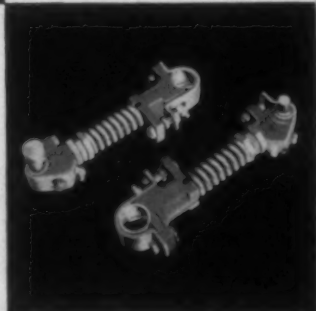
CAM SHAFT GEAR with precision machine cut teeth. Gives outstanding service.

BTM PART No. 66931



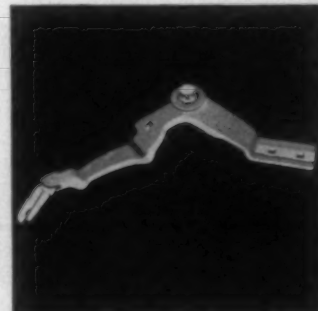
IDLE GEAR ASSEMBLY with 54198-H stud collars, nuts and washers. Brass bushing. Hardened and ground stud. Alemite fitting.

BTM PART No. 3003-XK



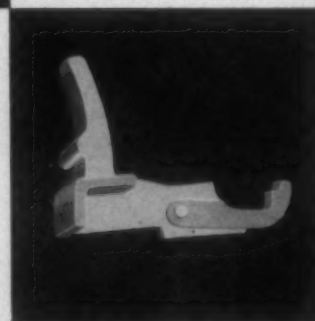
SPRING CRANK ARM, complete with 58938 Crank pin (replacement for Wood Crank arms).

BTM PART No. 67848-A



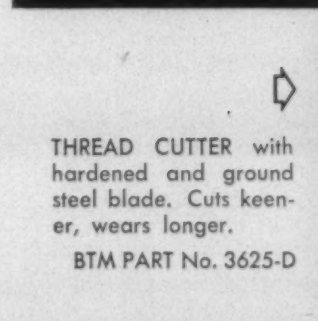
FILLING CAM FOLLOWER complete with ball bearing. Hardened and ground steel stud.

BTM PART No. 16818-X



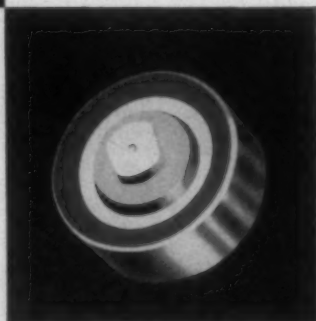
TREADLE ROLL, anti-friction ball bearing, grease packed. Eliminates fire hazard.

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THREAD CUTTER with hardened and ground steel blade. Cuts keener, wears longer.

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there's not much effectual Republican resistance to Taft left. His adherents in all but three instances will become chairmen of Senate committees, with his ally Jenner (R., Ind.) heading the all-important Senate Rules Committee.

Taft is the top-ranking Republican on the Senate Labor Committee, and thus in line for its chairmanship. Either Mundt or Case, both of South Dakota, are expected to replace Nixon on this committee. It will retain six pro-labor Democrats, and Morse of Oregon, which is a committee majority.

Organization of the House will be almost wholly along the line of the 80th Congress, with few changes in committee chairmen. Reed (R., N. Y.), a strong advocate of tax reduction, will head the tax-writing Ways and Means Committee. Taber (R., N. Y.) takes the helm of the Appropriations Committee, and McConnell (R., Pa.) will lead the Labor Committee. Short (R., Mo.), a rigid opponent of universal service, will steer the Armed Services Committee. Allen (R., Ill.) will resume top place on the Rules Committee.

The House will be dominated again by a coalition of Republicans and conservative Democrats. Republican "left wingers" will not allow absolute control to G.O.P. leaders. Eisenhower will be wholly dependent on a House coalition in all policy-making legislation and national defense measures.

Thumbnail sketches by those who know Eisenhower at close range say his mind works with precision, picking men like he would a suit of clothes. He does not like the grind of hard work, and insists on summaries of all long and tedious reports. He likes to be "briefed," and likes men with ability to "brief" concisely and accurately. He has a scorching tongue at times, and is not "politically minded." He is not a narrow partisan.

Eisenhower is expected to give a model in clean government, near the pattern of Hoover or Cleveland. He will keep on good terms with Southern leaders because he carried some of their states. He's expected to try to build up a two-party system in the South, and told them so, but he is not expected to cut off Southern Democratic leaders from patronage in their states. He will try to develop new capable leaders in his party, because, says one close friend, "he missed them in his campaign."

Eisenhower is expected to put strong emphasis on economy, and cutting out Truman waste and duplication. He's giving thought to a "task force," of high and trusted officers, to go through the military, naval and air establishments, and cut waste to the bone. This would be an initial step to a sweeping reorganization in the whole national defense set-up, with reports directly to the President. The "task force" idea may be extended to other branches, including the Justice Department and Bureau of Internal Revenue.

One of the sharpest edges of reorganization is expected to strike the Labor Department and N.L.R.B., where union bosses have been dominant. Republican advisers feel both of them are loaded and slanted against industry, business and the public, and have been used as primary instruments for inflation. New faces will appear in all echelons of N.L.R.B.; its shake-up is expected to be ruthless.

Advisers of Eisenhower say there will be neither inaction or drifting where important foreign policy decisions are needed. Eisenhower has said foreign aid is still needed, but "the time must come quickly when free nations co-operate to their own mutual advantage." He sees no solution for world ills in "one nation making pensioners of other nations."

As Eisenhower began contemplation of his trip to Korea, a close adviser put forward the idea of asking Stevenson to accompany him. The intent was to benefit by Stevenson's suggestions, and above all else, make clear to



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1952



Russians and Chinese, and other countries, that while a national campaign may be rugged, and even bitter, national differences stop at the water's edge.

Foreign nations generally are not pleased at the election of Eisenhower, and British and French disappointment is keen. There's a belief abroad he will be vigorous in dealing with military build-ups, and force a showdown on European rearmament. He complained bitterly while in Europe over the British and French dragging their feet; now he's expected to translate words into action.

Federal agencies are facing upheaval in official and personnel changes as the budget comes up and cuts made where they hurt most. Job duplications face wiping out. The Departments of State, Justice, Labor and the Post Office will go through the wringer. Earthquakes are due to hit the Federal Security Agency, N.L.R.B., the Bureau of Internal Revenue, Federal Power Commission and the Veterans Administration.

Emphasis on economy, and cutting down duplication and needless spending, will come ahead of tax revision in the new session. Taber says his studies reveal many thousands of jobs can be abolished without affecting essential service. Truman has been set to spend \$85 billion next year, but Eisenhower has promised heavy cuts, with a possible ceiling of \$50 billion in 1954.

New Chairman Reed says the Ways and Means Committee will launch a long-range study for revision of taxes, probably not coming up before 1954. The 30 per cent excess profits tax, bringing in \$3 billion a year, expires June 30. Treasury officials think its removal will encourage business and bring in more revenue.

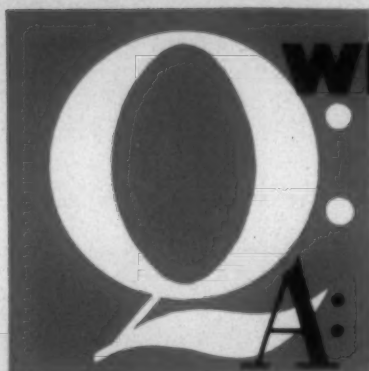
Three other tax levies, bringing in about \$5 billion a year, will expire by limitation within 15 months. The 11 per cent increase in personal income taxes, bringing in \$2 billion a year, will expire Dec. 31, 1953. On April 1, 1954, excise taxes of \$1 billion a year, and the five percentage points added to corporate taxes this year, bringing in \$2 billion a year, expire. The levies will not be extended unless there is prospect of a shooting war.

Abandonment of all price and wage controls may come as a result of the dispute over the pay increase for coal miners. W.S.B. refused to approve the \$1.90 gained by John L. Lewis from the mine owners. Lewis then met in conference with Truman. Next heard was that public and industry members of W.S.B. had told Truman they would resign in a body if their finding of \$1.50 was overruled.

Death of Philip Murray will reshape the whole course of C.I.O., and the steel workers union, but not likely to produce a closer alliance with A.F.L. Murray was one of the big three, with Green and Lewis, but did not enjoy great enthusiasm from rank and file C.I.O. members. Under the most persistent prodding of Murray and Green, big industrial centers, with the exception of Detroit, failed to roll up expected "labor majorities" for Stevenson. A "labor vote" appeared to be non-existent.

The Taft-Hartley Law is not likely to be changed, unless in ways of its administration, by the new Congress. Union leaders failed to make the law's repeal a winning issue, and attacks on it by Truman seemed to strengthen its support. Ranks of proponents for repeal in Congress are diminished in the election's outcome.

Union bosses, who have had free and easy access to the White House, will have to ring the front door bell now when they want in. The back door is locked, and night keys missing. Union leaders threw everything they had at Ike, expecting to win high, wide and handsome with the Democrats. They took their biggest defeat in the Eisenhower sweep, although both A.F.L., and C.I.O., went all-out to endorse Stevenson.



**WHERE** *do you think,*

*the Automatic Loom Bobbin was*

**INVENTED, PATENTED and DEVELOPED?**

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All of the "Old Timers" in the mills will of course remember that U S originated and patented the Automatic Loom Bobbin... but many of the younger generation may never have been told this important fact.

And it is an important fact, for **where but in the place of origin** would you find the enthusiastic pioneering spirit which not only creates a revolutionary idea, but is constantly alert to develop it to the highest point of perfection and use?

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Where... but at U S — can you find ownership of such extensive acreage of forest lands, the source of the desirable Adirondack Rock Maple? ... And with complete control of the stock from the time the logger goes into the woods until the bobbins leave the shipping platform!

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Where... but at U S — can you find a complete metal fittings shop, where all rings, bushings, shields and stampings are formed... on U S-made dies?

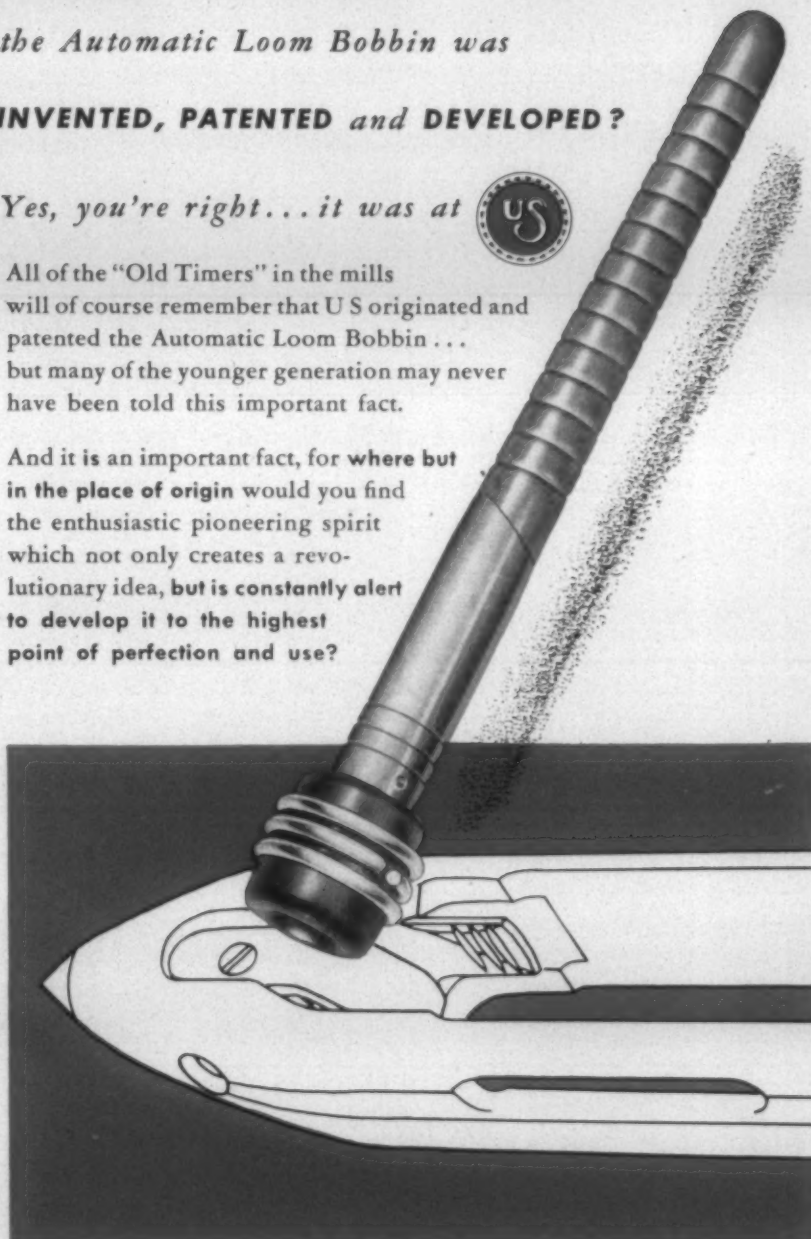
Where... but at U S — can you find a modern enameling and finishing department where bobbins can be finished right in the plant and not be subjected to the possibility of picking up moisture if transported to another plant for that operation?

Where... but at U S — can you find a fully equipped plating department? No holding up delivery by sending the work out; complete control of quality in plating.

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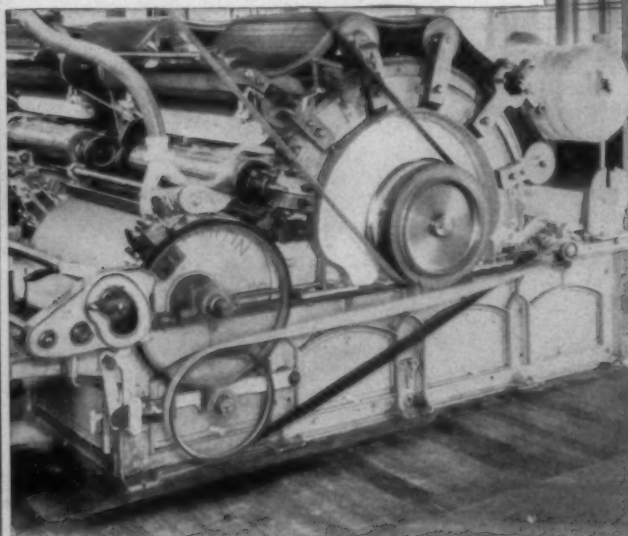
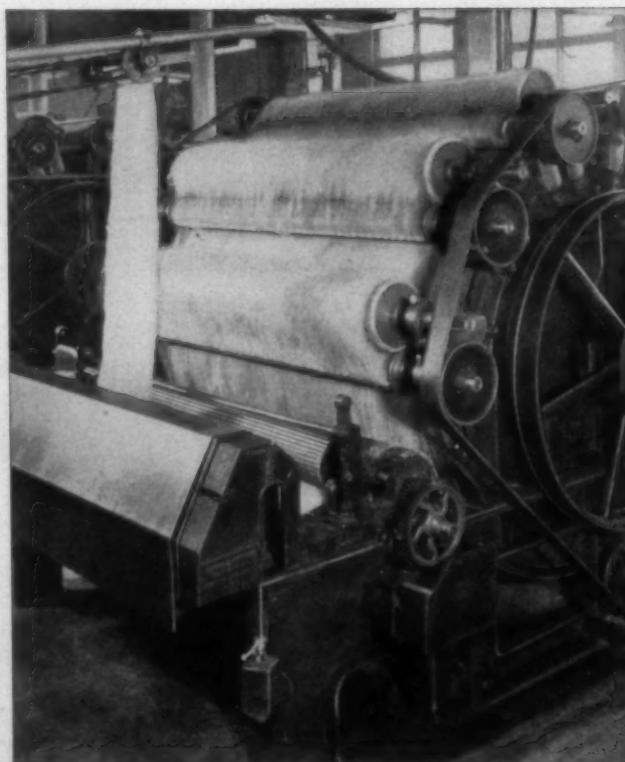
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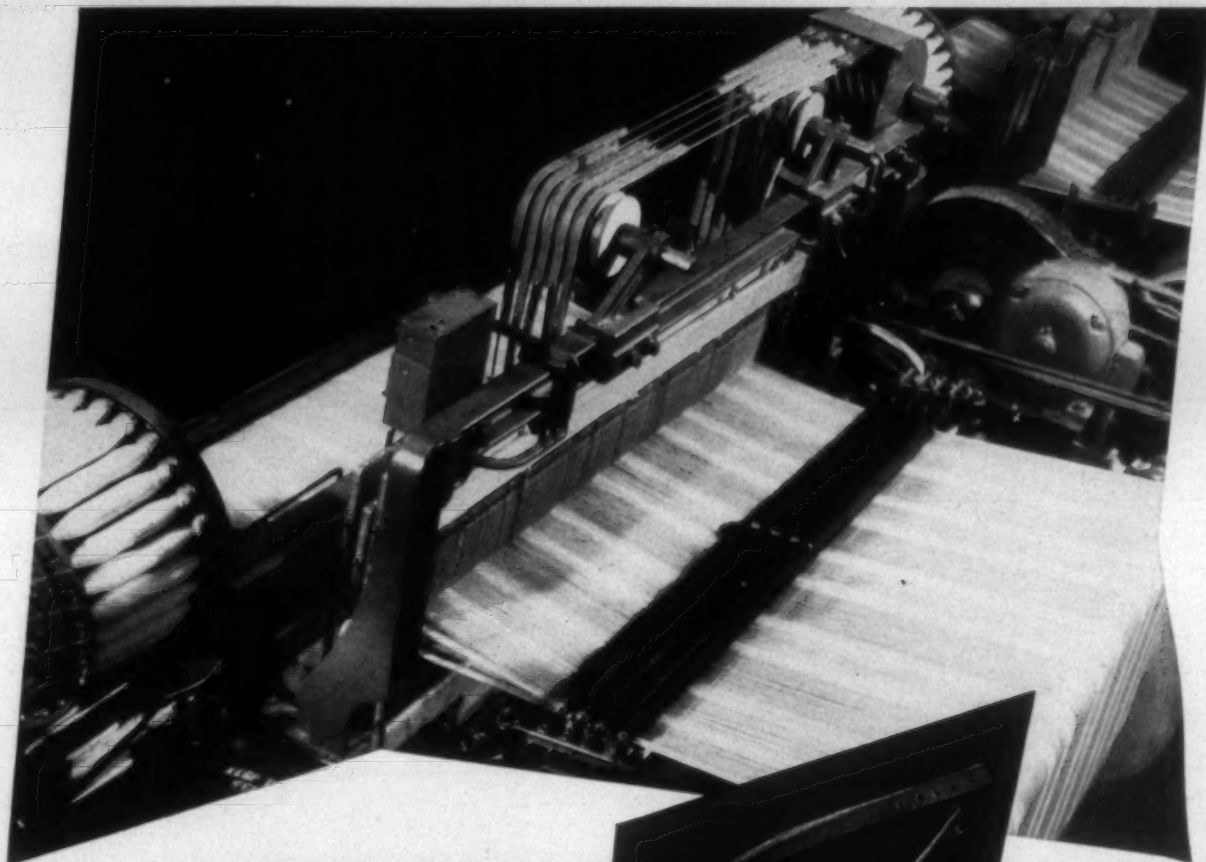
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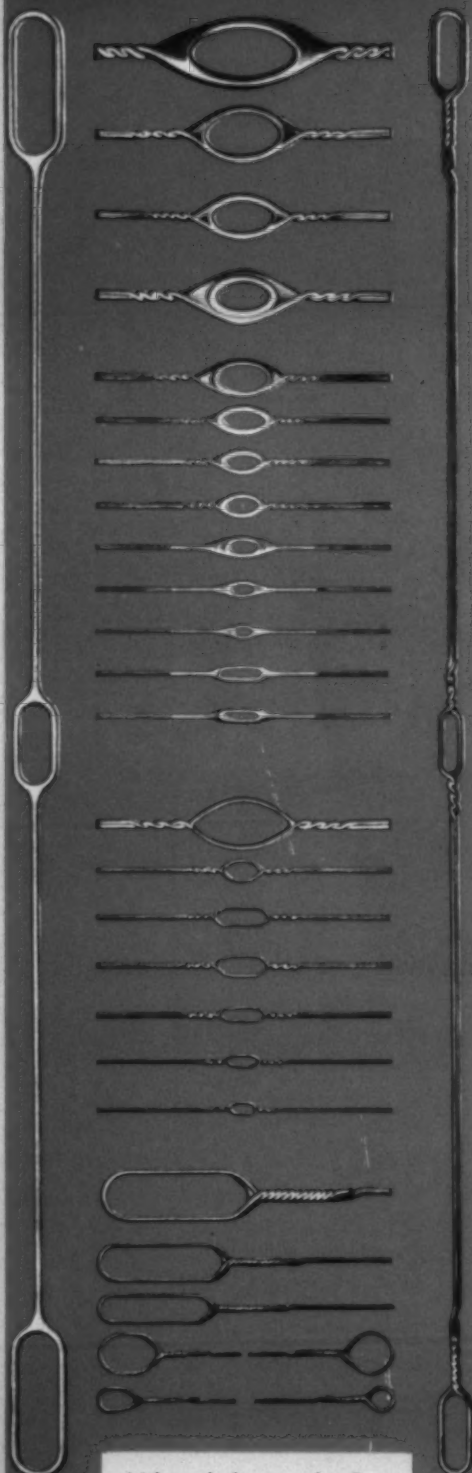
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## WHAT OTHERS ARE SAYING

### An American Dictator

THE American people should ponder seriously some important words by former Defense Mobilizer Charles E. Wilson in a speech in New York City. Mr. Wilson was discussing his efforts to settle the recent steel dispute before it could cripple the nation with an unnecessary strike. This is what Mr. Wilson said: "I was overruled by a single man who was never elected or appointed to national office, but a man who exercises more control over the country than the President, the Congress we elected and the officers appointed under the government."

Mr. Wilson was talking about C.I.O. Steelworkers Union Boss Philip Murray.

The former defense mobilizer explained that a "just solution that was best for all concerned" was offered. "But," he disclosed, "the solution did not happen to give all that was wanted to one single man, this man who is able to ride roughshod over the President and the people. 'That one man gained his ends through the steel strike that he personally called. And he did it without regard for the hardships he caused the people he put out of work, without regard for the troops in Korea, and with full knowledge of the dagger he was holding at the back of all of our citizens.'"

Is that the way things should be run in the American Republic? Clearly, the next Congress has a great responsibility to the American people to take such action as is necessary to remove the nation from the irresponsible clutches of such powerful dictators.—*Chattanooga (Tenn.) News-Free Press.*

### Give Us Time

IN 1913, after a sufficient number of states had ratified the 16th Amendment, a seemingly innocuous law was passed by Congress permitting a levy on the income of individuals and corporations. Count von Bernstorff, then German ambassador to the United States, said: "You have adopted an income tax. That is the beginning. You will have more and more burdensome taxes. What amazes me is that your people seem intent upon following our

example, instead of developing the system provided by your Constitution. Wait a few years and see the result!"

Von Bernstorff may have been a poor diplomat but he was a good prophet. Beginning in 1914, with a very modest share of the citizens earnings, this tax is now extracting from individuals alone more than 27 billion dollars per year or 450 dollars for every working person in the country.

Taxation in the United States has passed the point of oppression. About all that can be said is that the tax forms of our Internal Revenue Department do not yet bear the flourish of a royal decree.—*Johnson City (Tenn.) Press-Chronicle.*

### Southern Industrialization

THE old slur that the South is taking industry away from the North with cheap labor was effectively refuted in a report from the Southern Association of Science and Industry at Chattanooga, Tenn. The new plants being built in the South, said the report, are the most modern that American ingenuity can devise, and they are substituting brains for brawn. Hence, cheap labor does not enter into the situation.

For years we have been accused of enticing industry to the South by offering unskilled labor at wage rates only slightly removed from slavery. But in these new plants the machines cannot be operated by that kind of labor. The workers must be trained in the use of automatic machinery, so that one man now does the work formerly done by perhaps a dozen.

Such plants cannot be lured to the South by offers of cheap, uneducated labor, because that is not the kind of labor such industries want.

H. M. Conway, director of the association, described a new Southern chemical plant in which the oil goes in one side, flows continuously through automatic valves and treatment chambers, and comes out on the other side in a variety of finished products. Only a few skilled and highly paid men are used to tend these automatic machines.

In a fiber plant in Alabama, he said, there will be more people in the research laboratories than in the produc-

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**Southern**

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(Actual Photograph)

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Steel Heddle Mfg. Co., the largest manufacturers of Loom Harness Equipment possesses every known facility and resource and is prepared to furnish every type of heddle required for your weaving needs. There is a specific Stehedco Heddle for every kind of fibre material or synthetic: Silk, Rayon, Nylon, Orlon, Dacron, Cotton, Worsted, Wool, Straw, Cellophane, Paper, Wire, Fibreglass and Synthetics.

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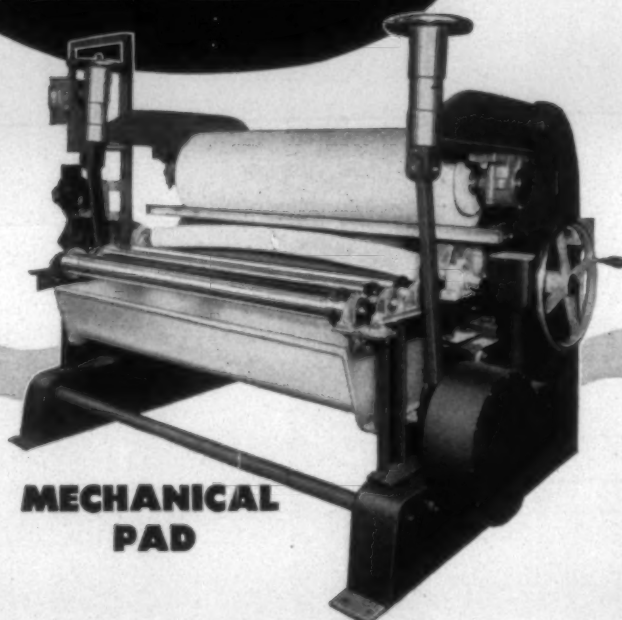
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STEHEDCO and SOUTHERN "Weave the World's Needs"



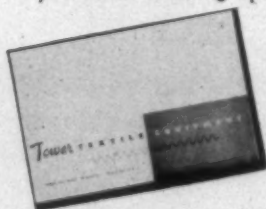
# INVESTIGATE *Tower* TEXTILE EQUIPMENT



**MECHANICAL  
PAD**

Can the installation of a Tower Mechanical Pad help solve your production problems? This unit is representative only of the broad range of Textile equipment now being offered by Tower.

Our engineers will consult with you in the design and installation of the finest in textile equipment, to meet your most exacting operational requirements.



Write for free booklet on Tower Textile Equipment

**IRA L. GRIFFIN & SON**  
Charlotte 1, North Carolina  
Southern Representative

## Tower Iron Works

Established 1835

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### WHAT OTHERS ARE SAYING

tion plant. Nobody puts cheap, uneducated labor in research laboratories. And cheap labor does not run machinery that takes an investment of \$30,000 for each employee.

And so it goes through the whole of this new Southern industry. Because it takes a greater investment to provide the tools for each job, the production of the individual worker is vastly increased. The scientists and the engineers in the laboratories are constantly looking for new methods that can increase this productivity still more.

The South is not competing with anybody on the basis of cheap labor, because it knows that low salaries and wages mean lower buying power and lower standards of living. The new industries are even more modern than those in other parts of the country, because, starting with a clean slate, they do not have to adapt old methods and old machinery to new conditions. They can start right off with the new system.

That makes for better and more productive labor and higher-paid labor. And that is the story of the industrialization of the South, which has only just begun.—*Charlotte (N. C.) Observer.*

### Inventory Your Protection

WITH the observance of Fire Prevention Week last month, there is need for a general "inventory" or review of the fire protection facilities of industrial plants. One objective, quite aside from that of prevention, is that of determining the adequacy of protection. For example, consider the nearest public fire department expected to respond when a fire emergency strikes, the kind of job that you expect them to do and how well they have been equipped to do it.

Is your plant located within a fire district?

Have you provided a fire alarm box on your premises? Shouldn't you?

Do responsible employees, including all watchmen, plant protection and powerhouse personnel know how to transmit alarms correctly?

Does plant protection personnel, including watchmen or guards, understand that they are expected to have gates open when apparatus arrives, directing the fire services to the scene of the fire in the shortest interval?

Is a complete up-to-date list posted at watchman or guard headquarters as to plant officials who should be notified, day or night, when an emergency arises? Have you arranged for the fire chief, or one of his officers, to be taken through the plant recently so that he may familiarize himself with the various hazards, their location, protection and other features pertinent to protection thereof?

Have fire fighting personnel and other employees been thoroughly trained in properly handling extinguishers and other portable fire fighting equipment? If your plant is located outside a fire district or may be served by a rural volunteer department, have you taken the necessary steps and shown sufficient interest to encourage improved facilities? Have you organized a well-trained plant fire department and discussed proper integration of this personnel with the public fire services in event of emergency?

There has been, in recent years, a tendency to decentralize industry. In so locating plants outside the fire districts of modern, fully equipped municipal departments, not always has it been

possible for rural departments to keep pace with industrial development.

Might we suggest that you make it a first order of business to consider each industrial plant under your jurisdiction a personal responsibility, protection-wise. Give solemn thought as to how well each plant is equipped to meet a fire emergency. Explore further the extent of protection requirements and just how and to what degree the services of your department can be of maximum value to these plants. Establish a working plan for the prevention and control of fires and keep it working so that the "plan works as planned" when the need arises.

The responsibility falls as much on plant management as on the public fire services to keep each other informed as to protection requirements so that both are prepared to work together and to work efficiently.—*The Sentinel*, Factory Insurance Association.

Judging from his conversation at the lunch table after school each day, the first-grader at our house definitely is majoring in recess. — *Greenville* (S. C.) *Piedmont*.

## What's That Speck?



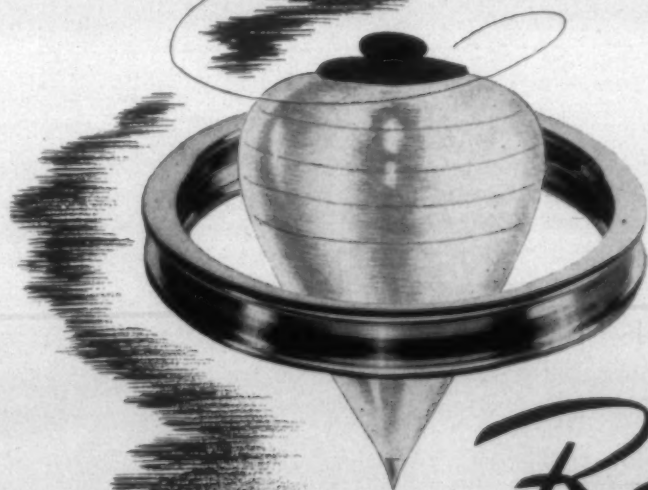
That speck is important. It's Armstrong County, South Dakota. Only 53 people live there, on seven farms.

It's important because it's the one and only county left in the whole United States that does not have a Federal civilian employee at work within its borders.

There are plenty of them in the rest of the U. S., though — more than 2,600,000 of them, an increase of almost 500,000 in little more than a year. There are about as many of them as there are people in all of Iowa, or in all of Louisiana.

Last year this constantly growing army of Federal civilian employees cost the taxpayers \$8,500,000,000 in pay alone.

# A TOP SPINS...



## but it doesn't do any work

Ragan Rings do a job, and keep on doing it a long, long time—because they have a special hard, brilliant AERO finish. For spinning or twisting, standard sizes or specially designed rings, buy and stick to

# Ragan Rings

**RAGAN RING COMPANY**, the only manufacturer of Textile Rings in the South, 866 Murphy Avenue, P. O. Box 174, Station A, Atlanta, Ga.  
Representatives: John Foard, P. O. Box 574, Newton, N. C. • Arthur Harris, H. B. "Booch" Askew, 443 Stonewall St., S. W., Atlanta, Ga.  
Henry Hersey, Dean Thomas, 44 Norwood Place, Greenville, S. C.

**4 FACTORIES**  
FALL RIVER, WORCESTER, PHILADELPHIA, GREENVILLE

**6 REPAIR SHOPS**  
FALL RIVER, PHILADELPHIA, CHARLOTTE, GREENVILLE, ATLANTA, DALLAS

**7 DISTRIBUTING POINTS**  
FALL RIVER, WORCESTER, PHILADELPHIA, CHARLOTTE, GREENVILLE, ATLANTA, DALLAS

*Ashworth*  
**PIONEERS IN CARD CLOTHING**

**You can ALWAYS depend on these numbers when you need  
CARD CLOTHING**

**4 FACTORIES** (Fall River, Worcester, Philadelphia, Greenville) which assure you of an uninterrupted supply of card clothing. Decentralized and strategically located, these factories can "pinch hit" for each other in emergencies.

**6 REPAIR SHOPS** (Fall River, Philadelphia, Charlotte, Greenville, Atlanta, Dallas [Textile Supply Co.]), which assure convenient, economical and prompt reclothing and repair service.

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**AND DON'T FORGET "90".** More than 90 years of experience in cards and card clothing — your guide to a consistently high standard of quality in manufacture and efficiency in performance.

Buy Ashworth Card Clothing and get **DEPENDABILITY**.

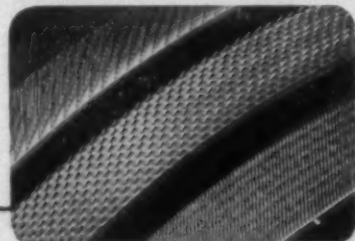
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*Ashworth* **CARD CLOTHING**

**PRODUCTS  
AND SERVICES**

. . . Card Clothing for cotton, wool, worsted, silk, rayon and asbestos cards and for all types of napping machinery. Brusher clothing and card clothing for special purposes. Lickerin wire and garnet wire. Sole distributors for Platt's metallic wire. Lickerins and top flats reclothed.







## What's the One and Only Way to Make Direct Dyes Triple-Fast?

Only with CUPROFIX colors and after-treatment can you give direct-dyed fabrics satisfactory fastness to *sunlight* as well as *washing* and *perspiration*.

Particularly on dark shades, CUPROFIX gives cotton, rayon and blends a degree of *wet* fastness that compares favorably with more expensive vat dyes . . . and a much greater degree of *light* fastness than any other after-treatment.

Since CUPROFIX colors can challenge vat-dyed results . . . and they cost so little more than direct dyes—*isn't it smart-business* to after-treat? And since CUPROFIX alone gives direct-dyed colors the extra saleability of *triple* fastness—*isn't it smart buying* to use CUPROFIX?

### Label Resin-Treated Garments "WASHABLE"

Adding CUPROFIX to the resin bath increases fastness to washing sufficiently to permit labeling garments "washable" instead of just "dry cleanable". It also:

- materially increases efficiency of the usual resin treatment

- eliminates in many cases the effect of resin on light fastness.

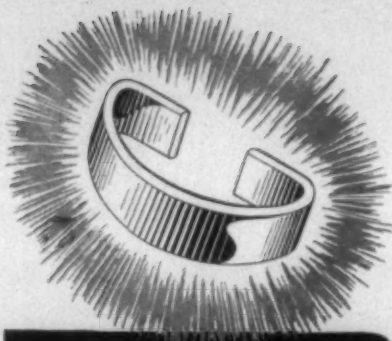
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**SANDOZ** *thinks ahead with textiles*





**DARY**  
*Ring Travelers*

## About Making Money-

Money-making begins at your break-even point. Keeping costs down lets you reach that point sooner. And, in spinning and twisting, one way to hold costs to minimum is to use the right ring travelers for the job.

Your friendly Dary representative is a specialist. Get his advice on selection of travelers, backed by our half century of experience!

*Always specify*  
**DARY Ring Travelers**

**DARY**  
REMARK OF  
SUPERLATIVE  
PROCESSED



### THE DARY RING TRAVELER CO. TAUNTON, MASSACHUSETTS

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CRAWFORD RHYMER, BOX 2261, GREENVILLE, S. C.

# The SOUTHERN TEXTILE HERITAGE

By W. M. McLaurine

- Part Nine of a Series -



IT IS interesting to look back to the days prior to 1845 and study the history of an infant industry. August Kohn in his book, *The Cotton Mills of South Carolina*, says: "It is perhaps just to concede to states the distinction of going first into cotton mills in a business-like way, but the claim that the first mill built was erected at Beverley, Mass., in 1787 is questionable."

He brings forth the following facts to prove the statement: In his study of Gregg's *History of the Old Cheraus* he finds an interesting reference from the *Charles Town Gazette* of Dec. 22, 1768, as follows: "A gentleman of St. David's Parish writing to his correspondent in Charles Town says, 'I expect to see our own manufactures much promoted in this part of the province. I send you some samples of what hath been already done upon this river and in this Parish. The sample of white cotton was made in the proportion of 12 yards to one pound of cotton. Hemp, flax and cotton may be raised here . . . but not much wool.'"

In 1770, there was a general movement towards developing manufacturing led by Henry Laurens, Esq. Out of home work into industries, the manufactures of cotton were engaging the minds of the men of South Carolina.

Mr. Kohn cites the fact that he had in his possession a letter, dated Charles Town, Feb. 19, 1777, written by Daniel Heyward, the father of Thomas Heyward, Jr., who was one of the signers of the Declaration of Independence from South Carolina. The letter was addressed to him while he was attending a session of the Continental Congress. The letter carries this information: "My manufactory goes on bravely, but fear the want of cards will put a stop to it, as they are not to be got; if they were, there is not the least doubt but that we could make 6,000

yards of cloth in the year from the time we began." There are other quotes in this period of the budding and growing interests of industry.

Mr. Kohn states, "There is abundant reason to believe that in 1787, Mrs. Romage, a widow living on James Island, Charleston District, S. C., established a regular cotton mill which was operated by mule power." On Jan. 24, 1789, *The City Gazette and Daily Advertiser* commented thus: "It is with genuine pleasure we mention that Mrs. Romage has commenced the manufacture of cotton cloth on James Island . . ."

Some have doubted this fact but evidence indicates that there were Romages living there then and Broadus Mitchell in *The Rise of the Cotton Mills of the South* also mentions this fact. There is other evidence; however, the histories of the cotton mill industry in South Carolina have usually named 1790 as the date.

This history between 1800 and 1845 is intensely interesting and many names and places mentioned are still familiar and plants and their leaders are still alive in history. These are some of the names clustering around the industry at the close of the 18th Century, John McNair, B. Warring, George Poor, Templeton McBride, Rogers and others.

In the early history of South Carolina lotteries were popularly operated with the approval of the state government. As evidence of the public acclaim they had at that time, it is reported that money was raised in this manner for the building of the Episcopal Church at Georgetown, for the Second Presbyterian Church at Charleston, for a church in Greenville and the First Presbyterian Church in Columbia. Hence in 1795 a group of men petitioned the state to operate a lottery for

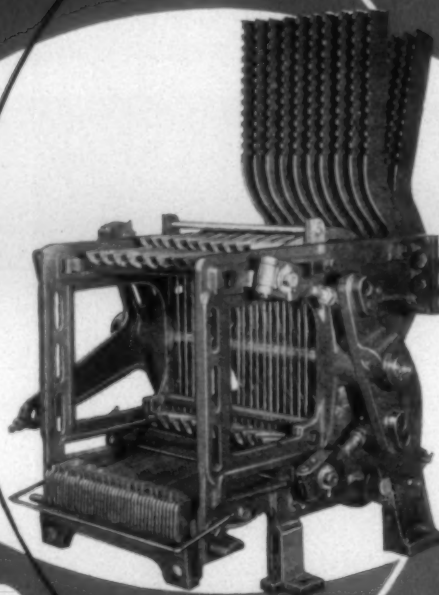
no other good reason why you find

# LIVERMORE

in the LIMELIGHT:

Using **HFL**  
IMPROVED  
DOBBY HEADS,

one mill had  
**2**  
NO DOWN TIME IN YEARS  
due to dobby head failure.



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are of  
Malleable  
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hardened. ROCKER  
ARMS are of Malleable  
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age, with hardened Rol-  
ling Boss. SPRING JACK  
BACK AND HOOKS  
have smooth and  
hard contact sur-  
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leable iron,  
eliminating  
tooth break-  
age.



STILL GIVING EXCELLENT SERVICE, with no sign of wear on any parts, a mill installation of HFL IMPROVED DOBBY HEADS has operated constantly for two years without any replacement of parts!

This appears to be a new record for dobby head life.

FORMER DOWN-TIME LOSSES are now converted into production gains . . . with no weaving imperfections resulting from dobby head failure, no repair or replacement of parts over long periods, when your looms are equipped with HFL IMPROVED DOBBY HEADS.

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LOOM PARTS insure minimum cost per yard of production.

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SOUTHERN DIVISION  
GREENVILLE, S. C.



the purpose of promoting useful manufactures in the state, and specifically for cotton manufactures.

But let us look into North Carolina for a moment. Here we find a dispute as to original mills—Lincolnton and Rocky Mount, both claiming priority.

Quoting from a brochure of history of the Rocky Mount Mills published 1943 I quote: "Evidence indicates that Rocky Mount Mills was the first cotton mill to be established in the state of North Carolina. Certainly it is the oldest mill in the state still operating at

its original site. Twelve feet deep, at high water, beneath the turbulent current at the Falls of Tar River, the solid rock foundations of the first Rocky Mount cotton mill stand today as firm and massive as they were when they were laid and pointed up back in 1817 by plantation owner Joel Battle's Negro slaves." The location was because of the current of the river which had operated a grist mill there since 1807.

Now I quote from Holland Thompson's *From the Cotton Field to the Cotton Mill*: "The first cotton mill in

North Carolina and one of the first south of the Potomac was built about 1813, on a small stream near Lincolnton. Lincoln County had been settled principally by Germans, Scotch-Irish and Swiss, many of whom had mechanical ability. Michael Schenck, a native of Lancaster County, Pennsylvania, who had prospered in his new home, determined to build a mill. Some of the machinery was purchased in Providence, R. I., and hauled by wagon from Philadelphia. Other parts were made by Schenck's brother-in-law, a skilled worker in iron."

In the history of South Carolina there is a record of a mill in Stateburg, Sumter County, which failed in its efforts in the early 1800s. The record says the machinery was sold to some person in Lincolnton, N. C. If this is true, perhaps some of it was used in the Schenck mill. The date of the Schenck mill seems to be authentic because a descendant has a contract signed by Michael Schenck on April 27, 1816, for completion of dam and certain extensions and machinery demanded.

The first application of steam to the cotton manufacturing industry was at the Mount Hecla Mills at Greensboro about 1830. In 1840, Francis Fries, a descendant of a Moravian minister, began a small wool business.

Scanning hastily the history of the cotton textile industry of Alabama by Dwight M. Wilhelm, I find the furious flowing Flint River edged and often cloaked with an unpenetrable silence of the incubation and gestation of the early mills of Alabama. The Cabaniss Cotton Spinning Factory 1809 to 15; the Bell Factory from 1832 to 1885, which was the real epoch making industry in cotton textiles; the mills at Tallahassee, 1844; and the mills at Prattville, 1846 to the present, constitute the early efforts that have available records.

No industry was born and brought to success under greater handicaps and with so much criticism and at times persecution. The spirit of success never died, never wavered in its high and holy concepts of service to humanity.

I like what the Southern colonel said: "If those dam' Yankees don't quit votin' the way we do this whole country is going to be in an awful mess." Best summary for the two-party system that made this nation great.—*St. Louis Post-Dispatch*.

# NON-FLUID OIL

TRADE MARK REGISTERED

## One in a thousand

7 out of 10 textile mills throughout the country have found that, although there are thousands of oils on the market, it pays to specify only one . . . **NON-FLUID OIL.**

**NON-FLUID OIL** provides positive lubrication upon split-second demand but does not drip or spatter like ordinary oil—so avoids spoilage loss. Carding, twisting, spinning and weaving production goes up and lubrication and maintenance costs go down with **NON-FLUID OIL.**

Send for instructive bulletin and free testing sample of **NON-FLUID OIL.**

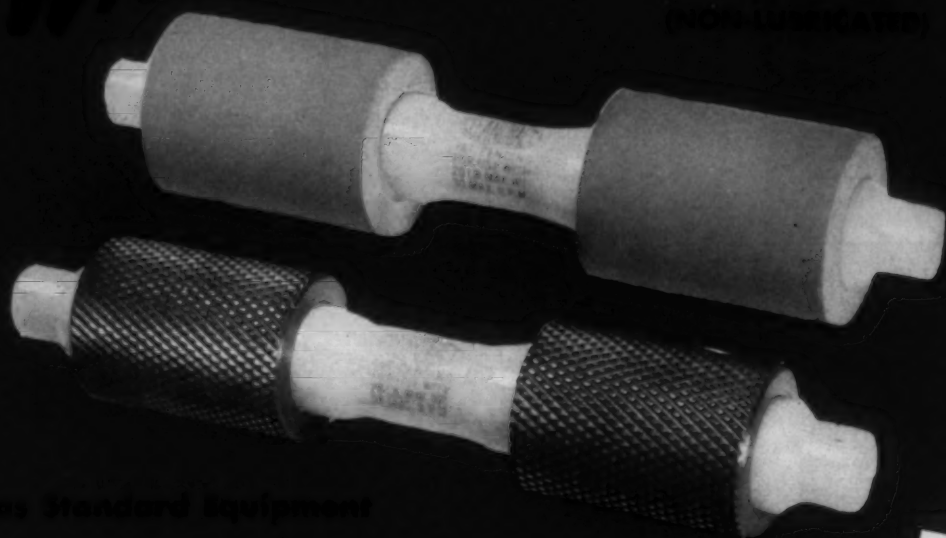
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292 Madison Ave., New York 17, N. Y. Works: Newark, N. J.  
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**NON-FLUID OIL** is not the name of a general class of lubricants, but is a specific product of our manufacture. So-called grease imitations of **NON-FLUID OIL** often prove dangerous and costly to use.

# Whitin adopts **CLEANDRAFT**

(NON-LUBRICATED) TOP ROLLS



as Standard Equipment  
for MIDDLE and BACK LINES ONLY

for  
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## Advantages of **CLEANDRAFT** Rolls —

- eliminates all oiling expense.
- greatly reduces picking cost; cycle extended to as little as once in several weeks.
- gives cleaner yarn free from oil.
- improves quality of yarn.
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*Whitin* has already previously adopted **CLIMAX**  
Ball-Bearing Top Rolls as standard where *anti-friction* rolls are specified.



**CLIMAX**  
BALL-BEARING TOP ROLL

Climax Rolls on front line form an ideal combination with Cleandraft Rolls on middle and back lines for spinning and roving. Under some circumstances, Climax Rolls are advantageous for all three lines:

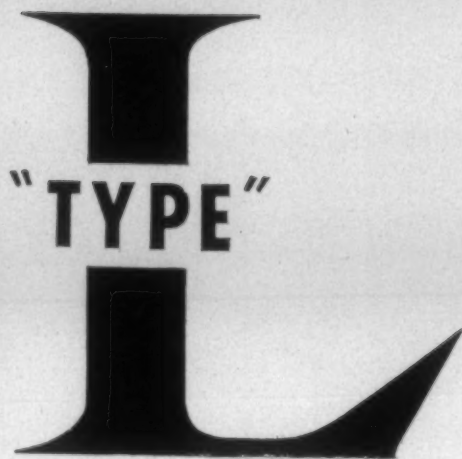
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**LOWER CLEANING COST — BOBBIN COST — MAINTENANCE**



## **BOBBIN CLEANER**

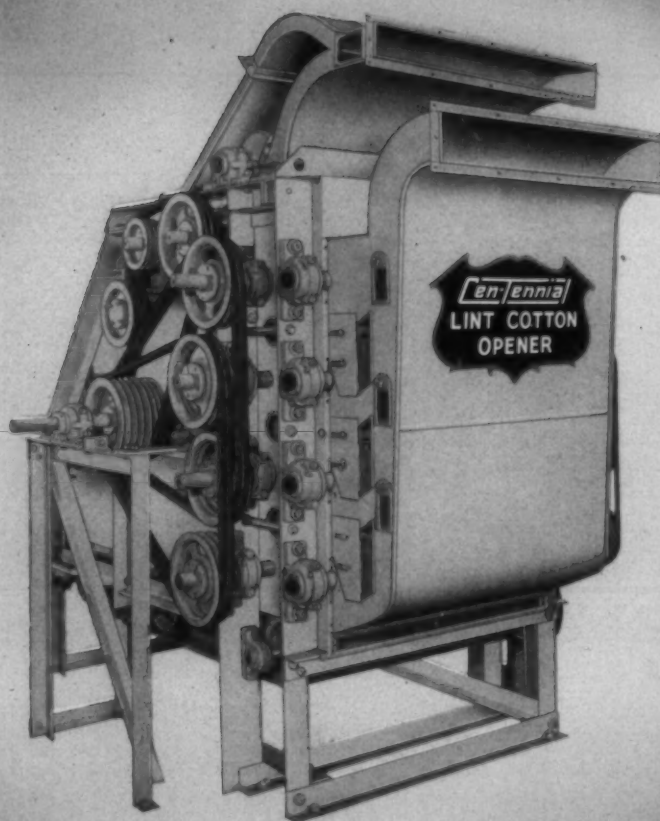


A growing number of mills, with a great variety of quill-cleaning problems, now enjoy the *extra* savings and advantages of Terrell's Type L Bobbin Cleaner . . . elimination of damage to bobbins . . . lower maintenance cost . . . fewer cloth seconds . . . reduced handling expense . . . plus the labor-saving advantages afforded by all Terrell equipment.  
Consult Terrell engineers about greater economy in bobbin cleaning.

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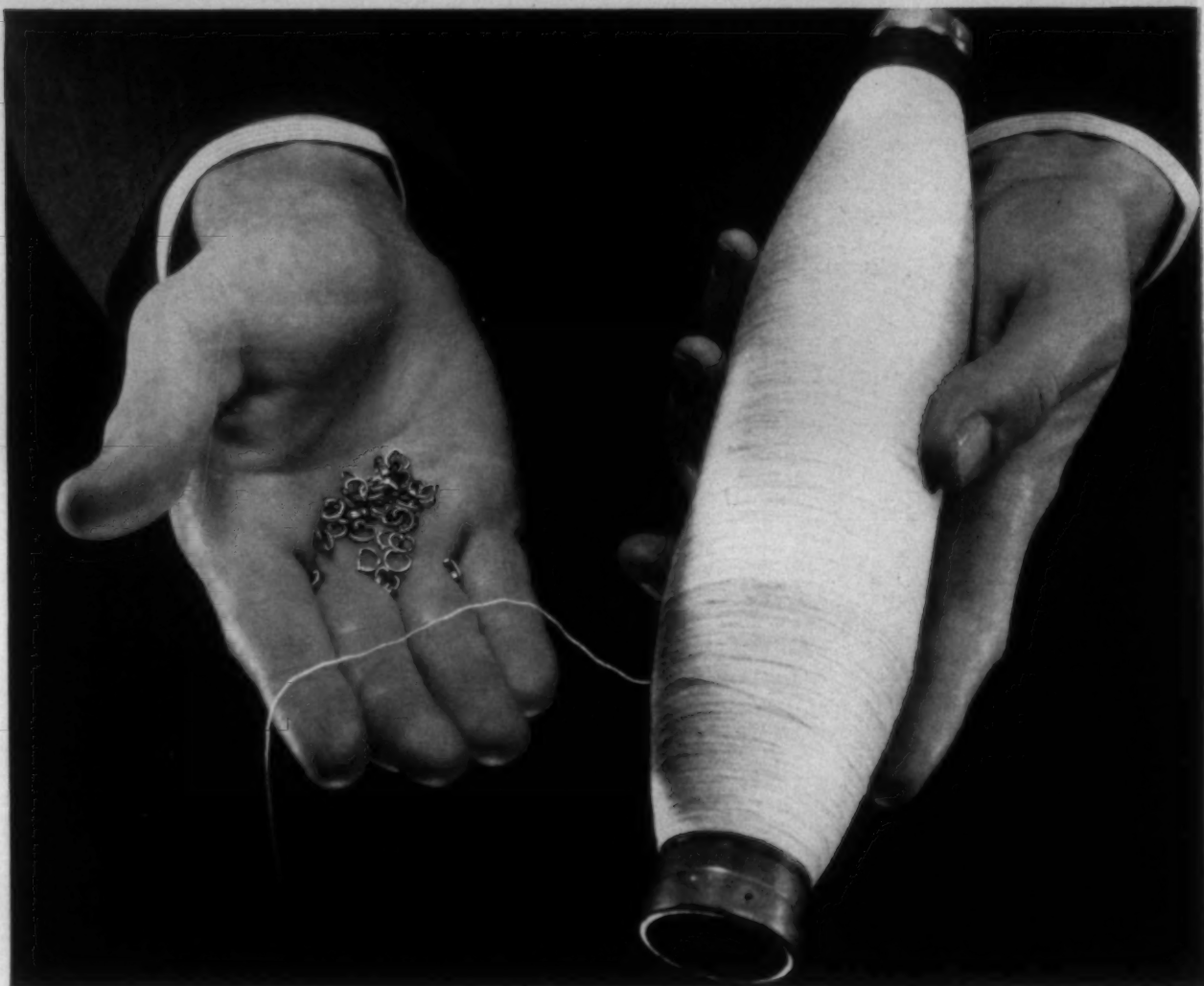
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*Cen-Tennial*  
COTTON OPENER



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The Cen-Tennial Cotton Opener is a product of years of research by Southern Regional Research Laboratory, and thoroughly proven by mill experience. It gives many advantages which result in better opening room efficiency, including less waste and a cleaner picker lap. Decidedly worth your investigating. Write for full particulars.

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## How Much Per Traveler-Pound?

The true test of a traveler is the number of pounds of top quality yarn which can be spun or twisted with it before it wears out. The more yarn produced, the lower your cost per traveler-pound.

Millmen who keep a sharp eye on production costs always judge travelers on this traveler-pound rating. And that's why so many choose Victor Travelers for spinning or twisting.

Victors consistently cost less per traveler-pound for two reasons.

First, because there are no better travelers made, by any test of quality and uniformity. Second, because Victor Service Engineers, all mill-trained men, can quickly grasp your special problems, and come up with the right answer.

They can not only recommend the *right* traveler, but can often make other suggestions for improving your quality and production,—whether you are running conventional fibers, synthetics, or blends.

Plan now to talk to a Victor man about your costs per traveler-pound. Write, wire, or phone the nearest Victor office . . . for prompt service.



**VICTOR**  
*1 Ring*  
**Travelers**

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Here's a softener that has demonstrated its ability on a wide variety of urea and melamine-treated fabrics. It not only gives greatly improved sewability, but has excellent bath compatibility with these resins as well as with anionic and cationic finishing materials.

## XYNO FINISH 9909

**Try it!**

A trial of Xyno Finish 9909 will convince you of its superior performance. Write for data sheet and let us know how much of this softener you want for test purposes.

was specifically designed for use with urea and melamine resin finishes. It possesses the following additional field-proved advantages:

- Extremely or highly resistant to yellowing at elevated temperatures
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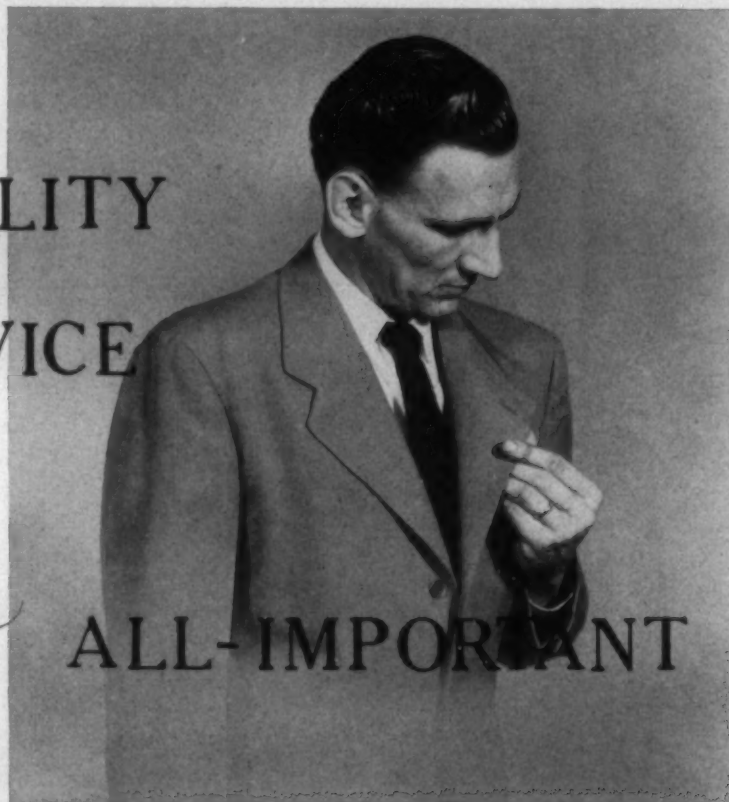
• QUALITY

*and*

• SERVICE

*are*

• ALL-IMPORTANT



• YOU CAN RELY ON

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Customer-approved Quality, customer-tested Service, are two all-important parts of the reputation for complete customer satisfaction which we cherish. WATSON & DESMOND customers have experienced such Quality and Service, and depend on them.

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Pennsylvania

# Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y.

NOVEMBER, 1952

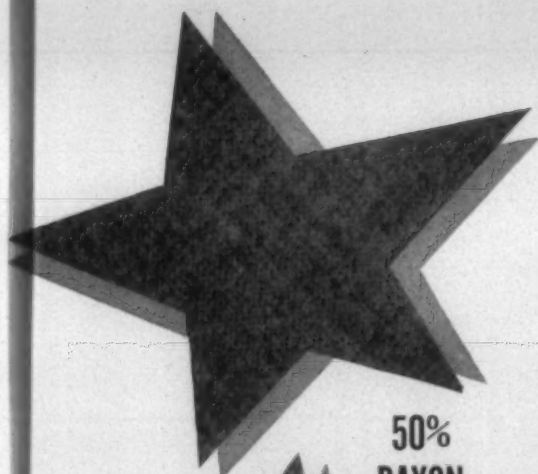
## Where does RAYON fit among the Miracle Fibers?

Interest aroused by heavy promotion of the newer "miracle" fibers has tended to obscure the fact that many of the desirable qualities of suitings and other textiles made with those fibers are actually imparted by rayon.

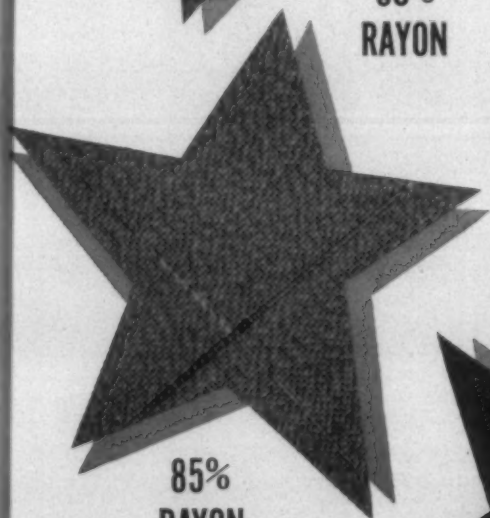
Manufacturers themselves are the first to confirm this with telling comments. "Oversold overnight." "Tremendous success on this number." "Particularly good for pants—especially tropical weight washables." These are typical reports regarding representative selections from their best blends.

Quick to explain the secret behind the success of their new rayon blends, manufacturers point out that rayon has a remarkable ability to provide fine appearance. Its strong affinity for dyes and for creating cross-dyeing effects of limitless variety are put to profitable use. And rayon can impart sturdiness, shrink resistance and luxurious hand in either tropical, winter or year-round suitings.

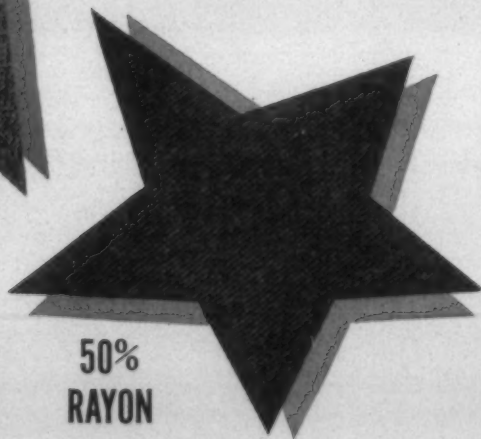
Of equal importance is rayon's thrifty ability to create volume sales without sacrifice of the best quality standards.



50%  
RAYON



85%  
RAYON



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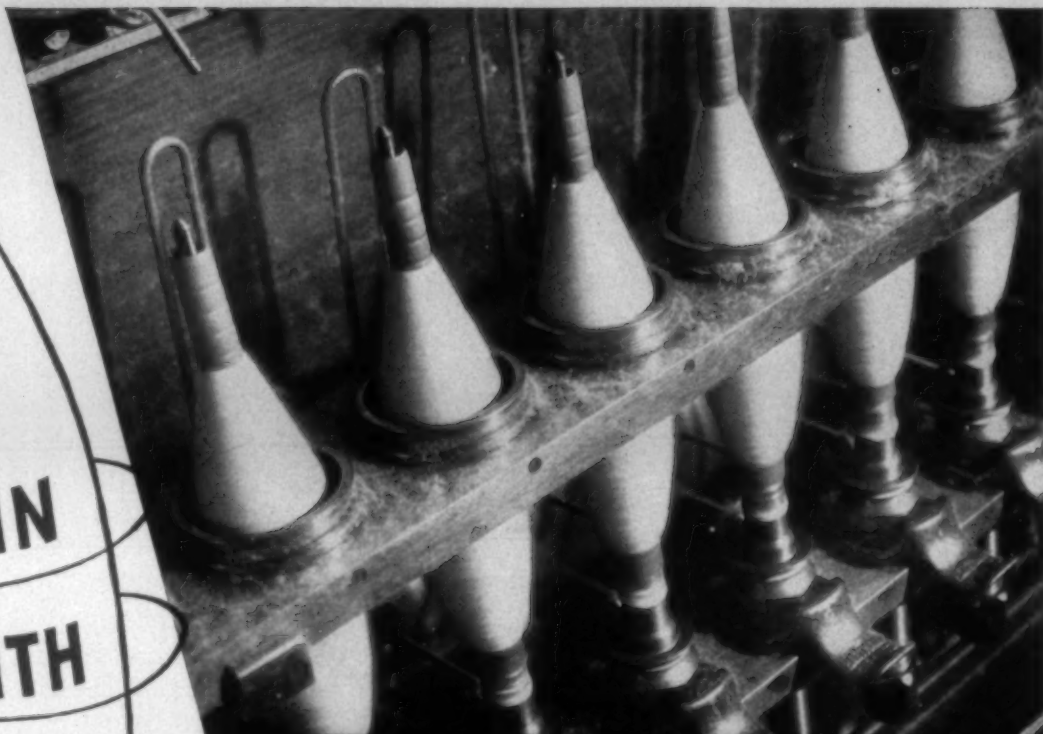
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## Production & Sales Co-ordination—A New Approach To Greater Mill Efficiency & Inventory Reduction

From a paper by R. M. ASHNER, Werner Textile Consultants, New York City

COMPANY planning, like breathing, is an essential—yet often unconscious requirement for existence. Whether it consciously recognizes it or not, management's continuous job is to lay out plans and then follow up to insure their execution. I would thus define management's primary function in two words: planning and control. Yet, despite the practical acceptance of this concept in their daily lives, I find many mill men shy away from any discussion of formal planning. To these men formal planning, and especially any mention of long-range planning, has an unrealistic, academic ring.

I propose to outline the general applications of long-range planning and proceed to describe a more specific application of short-range planning in the co-ordination of production and sales. Company policies and actions must be directed towards our final objective, problems must be anticipated before they become acute and solved in line with these general policies. Waiting until a problem hits us squarely in the face and then jumping to the nearest solution in sight—with little or no regard for company policies and objectives—can only lead to confusion, conflict and frustration in company personnel and operations.

Long-range planning for industrial enterprises is no revolutionary idea. I have come across a very interesting article which states that many large companies such as Westinghouse Electric, Standard Oil, and Monsanto Chemical, are now planning and forecasting their operations for a period of two, three, five or ten years. Of particular interest to me was the fact that the two textile firms questioned by the reporter did not believe such planning possible. Let me quote their comments verbatim. "How can we make long-range plans with synthetics coming in? The fiber we'll be using in ten years probably hasn't even been put into the test tube yet." . . . "We're vulnerable to too many things; volatile labor, frequent price changes, and now these synthetics. Oh, we've got charts and figures 'til you're blue in the face, but they're short-range. We watch for the danger signals and that's about all." These comments sound to me somewhat like a farmer saying that since he is not sure it's going to rain this season there is no sense in planting. In the first place, in spite of considerable new additions to the old established fibers, manufacturing methods have not undergone any revolutionary changes. We still spin and weave on the basic cotton, wool and filament

systems. Secondly, it seems to me that the more changes you anticipate in your field, the more prepared you should be to meet them, and therefore, the better should your planning be.

Long-range planning must integrate and co-ordinate the many dynamic factors that in total make up business operations. The process of drawing up a budget to forecast operations and then comparing actual performance against it is now commonly regarded as a valuable management tool. The simple principle must be applied to all other phases of management functions. Each of these phases presents complex problems requiring considerable technical knowledge and experience. To complicate things further, very few of these problems fall solely within the province of any one department or unit. For instance, a sales problem may closely depend on production, quality, and finance. Gone are the days when a company could be run effectively as a complete one-man show.

Effective planning, therefore, must rely on the specialized knowledge of quite a number of specialists in various fields closely integrated into a common view of the company's course and its goals. Teamwork must be the watchword. These diagrams illustrate the expected results from teamwork planning as against unrelated, piece-meal planning in a departmental or sectional vacuum. A sound practice that is currently gaining recognition is the inclusion of all talents available to the company on its planning team. Why not utilize, when appropriate problems arise, some of the brains not on your payroll? Why not use your bankers, insurance agents, consultants and lawyers on this team?

Consider, too, the invaluable training ground that a planning team provides for your company. Young executives participating in this team enjoy a bird's-eye view of all company operations rarely available elsewhere. This experience prepares and conditions them for future leadership and provides continuity in the development of top management talent.

Before leaving the discussion of formalized company planning, let me throw out a thought that may have some bearing on the current New England-South controversy. Mill managements which are often reluctant to undertake formalized planning programs are unwillingly forced into them when building new plants or starting new operations. Production, sales, personnel and financial policies must be

planned and developed where none existed. Management enjoys first-hand experience in planning, provides a mechanism to handle it, and automatically establishes long range programs and policies. Usually management emerges the better for this experience.

Many Southern mills have gone through the initial planning phase within very recent years. Most New England mills, on the other hand, have traveled a long way from their foundation planning. The newer Southern mills, therefore, enjoy not only the advantages of new equipment and a more recent operational program, but also their important by-product: aggressive, planning-conscious management.

This certainly does not imply that the South has any monopoly to effective management. The application of sound management principles has no regional limitations. Let me cite two examples with which I am personally familiar. Mill "A" is a medium-sized, vertical concern, operating over 1,200 looms. Its management decided to take on a specialty fabric which appeared attractive at the moment, and added some 100 looms for its production. There was no available space for these looms in the weave room. A frantic space-hunt started, and an old basement with sufficient floor area was discovered. It was realized that this space was not particularly suitable for weaving, but the path of least resistance was taken and the looms were installed in the basement. Hardly were these looms started in operation, when it became evident that operating costs—due to transportation difficulties—were excessive. At the same time, a new picker room was being built, making space available in the old picker room. Without regard to an existing plan that envisioned expansion of the card room into the vacated area, the specialty looms were quickly moved into the old picker room.

Less than a year later, the card room expansion program became acute and our looms were on the move again. A hasty decision was again made. Raw cotton could be stored in outside rented space and the vacated cotton warehouse could house the wandering looms. While this shifting was going on, the bottom dropped out of the specialty fabric market. Today the specialty looms are standing idle in glorious isolation in the cotton warehouse, while the company continues to pay substantial rent for its outside cotton storage. The moves and shifts I described cost the company some half a million dollars. The mill involved is located south of the Mason-Dixon Line. Well south of it.

By contrast, Mill "B," an old-established *New England mill*, has been producing a variety of cotton fabrics for many years. The company is operating nicely in the black and is not and never has been in any financial difficulty since the management of this mill planned for the post-war period. They experimented with long-staple spinning and adapted their machinery to these fibers. They were among the first to blend man-made and natural fibers. They recognized early the potential savings in improved layouts and automatic materials handling equipment; consequently, even at a time when building construction was prohibited by law, they prepared detailed plans for their future expansion—in New England. These plans were scrutinized at leisure by everybody in the mill, and I mean everybody. The departmental overseers, the union stewards, the personnel manager, their materials handling consultant, the machinery suppliers, their air conditioning engineers, the local authorities, in addition, of course, to the top manage-

ment of the mill—the plant engineer and the consulting engineers. They all lived with the plans. Everybody felt he had a stake in the future development and hundreds of large and small changes were made on paper. When finally the time came and building was possible, they were ready to build one of the finest mills.

Also in the administrative field they were and still are continually looking ahead. Even during the war years when the necessity for production planning and co-ordination was not as great as today, they planned their organizational and administrative set-up for it. They started then to set up their quality control, maintenance control, waste control, supply control, fiber control. All these were introduced at a time when the additional profit dollar did not mean much, but they were ready when costs started to be recognized again as the main factor in profitable operations. Despite all that the management of this mill continues to study future potentialities and opportunities. Just recently, a survey proved that competition in its present products is going to increase and reduce their profitability. They have therefore decided to evaluate the textile market, select new products with promising future potentials and prepare for their manufacture. The company is prepared to invest in new equipment, new machinery, and take any other steps necessary to insure its future operations. This study and survey is now being prepared, while present operations continue profitably. This management has for years wisely anticipated the coming problems and is in the habit of planning before conditions become acute and its finances and credit standing weakened. That is an example of sound long-range planning.

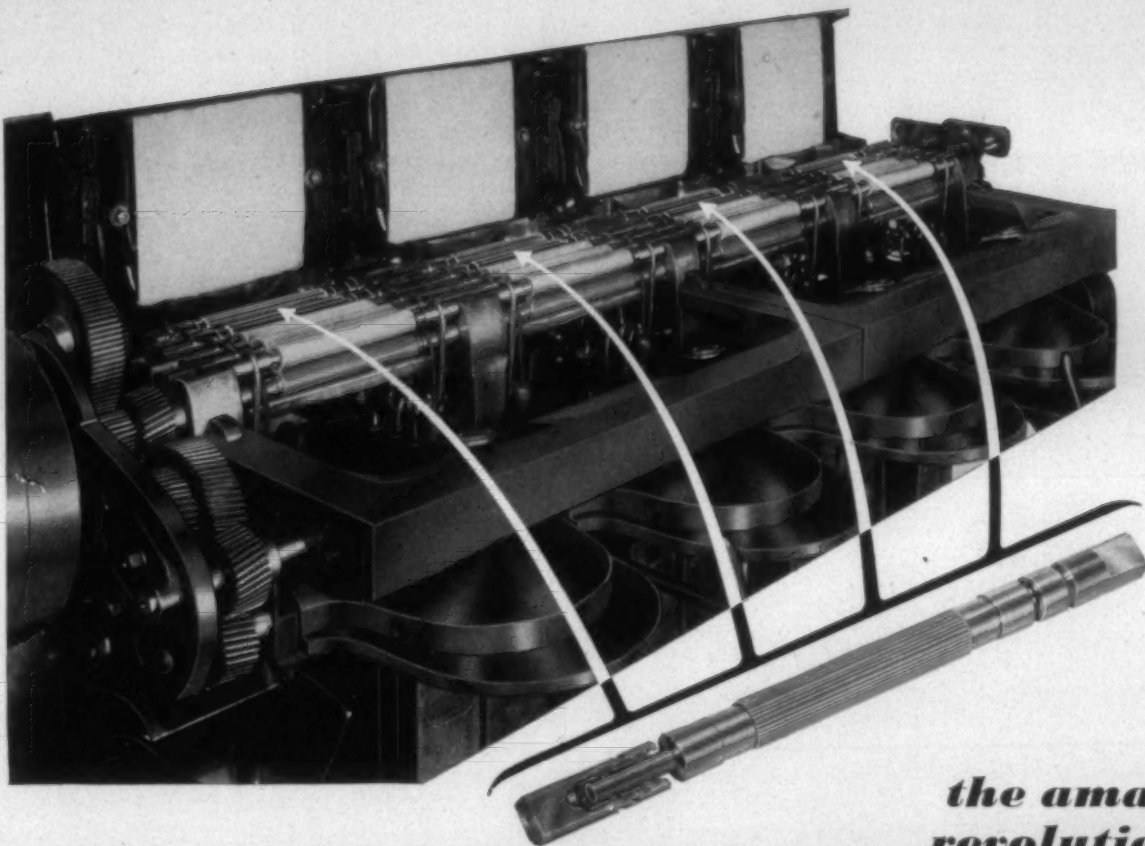
At this point, I would like to leave the discussion of general planning principles and treat one phase of planning which, at the present time, overshadows most others in importance. That phase is the planning and control of sales and manufacturing and their co-ordination. Full and constant utilization of a plant's facilities and personnel at top efficiency can do more good to the profit picture of a company than trying to get the last out of work loads and economics in raw material.

As an industrial consultant I am the last one to underestimate the importance of proper work loads and reduction of waste, but I am sure you will agree with me that when you have a plant which runs only at say 80 per cent of its capacity or less that you can improve on costs faster and to a larger degree by taking steps to increase the percentage of utilization or efficiency to 90 per cent than by the long-drawn-out efforts of refining work loads. Once you have the mill working at top efficiency, then usually as a further step for cost reduction is the time to concentrate on work loads and waste. I realize, of course, too, that in extreme cases you may have to work on all phases simultaneously.

To illustrate to you what I am talking about, I would like to give you the facts and figures of a mill we are working in right now. The mill is running at present three shifts, but because of an over-diversified manufacturing program in specialty lines and because of poor planning of production and poor co-ordination of sales and production, it is working at a very low efficiency. Therefore, the mill is losing at present an annual sales volume of four million pounds.

The fixed costs per pound at this mill are 16 cents. Four million times 16 cents amounts to a loss of \$640,000 annually. This sum does not include any profit which the





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mill makes on every pound of production. If one would add that figure it would come pretty close to the million dollar mark. In other words, this mill is throwing away a million dollars annually just because it has not been able to map out an effective co-ordinated sales and production program. The adoption of such a program would avoid frequent, time-consuming changes on their equipment and eliminate excessive down times while looms wait for warp or filling. We figured for this and other mills what every per cent increase in efficiency means in dollars and cents. The amount, of course, varies with the size of the mill, but it always is an astoundingly substantial sum of money varying between \$30,000 to \$100,000 annually for only one per cent increase in efficiency.

In citing these figures, I intentionally stayed on the conservative side, because there are many other indirect benefits and additional savings the mill will make as soon as it begins to plan properly, such as: reduction of inventory of goods in process and finished goods, avoiding of panic amongst the top personnel, rush orders, rush production, dissatisfaction of labor, etc.

We made a survey of the percentage of customer orders cancelled in one large organization due to their failure to deliver on time. It was two per cent of the order volume. This two per cent, in that case, amounted to a loss in sales of \$2,300,000, or a loss in profits of \$300,000 annually. This figure does not include the additional amount of overhead charges these lost sales of \$2,300,000 would have absorbed. The sole reason why this organization is losing \$300,000 annually is its inability to meet delivery promises. Furthermore, the loss in goodwill due to disappointed and disgruntled customers could not be figured. But, all of you who are in business, will agree with me that it means a great deal. In arriving at the figures above, we could take only those orders into consideration which were actually cancelled due to late delivery and not the effect on those customers who took the goods despite the fact that they were disgruntled because their manufacturing schedule was disrupted. The situation has now been rectified. Every incoming order is checked by the production and sales co-ordinator and delivery promises that cannot be kept are not made.

One final example—a finishing plant where due to proper co-ordination and control of production and sales we were able to reduce the average time of goods in process from five weeks to  $3\frac{1}{2}$  weeks. It doesn't sound much—only a week and a half saved—but with the quantities going through that plant with an average production of three million yards weekly, it means  $4\frac{1}{2}$  million yards less goods in process. At a cost of 40 cents a yard this means a reduction of capital requirements of 1.8 million dollars. Calculated at an interest rate of six per cent, it means that this plant could save \$108,000 annually in interest alone. Furthermore, due to the physical reduction in inventory this organization was able to discontinue renting outside storage space for which they used to pay \$12,000 annually. Thus, altogether, they save \$120,000 annually just by reducing the time the goods stay in the plant by a week and a half only.

You can put a price tag on increased efficiency, reduced inventories, reduction in storage, but how can you put a price tag on such other vital factors as: customer satisfaction and confidence and company goodwill? Similarly, some of the benefits to mill personnel defy accurate dollar and

cents calculation, but their practical value cannot be denied. Overseers are relieved of the constant worry and fuss of running their departments and planning their work with little or no idea of what tomorrow may bring. The constant fluctuation of being swamped with work one day and starved for it the next are real and acute supervision problems. Or, how can we evaluate the security and consequent pro-company attitude employees develop as a result of steady work, minimum lay-offs and elimination of seasonal cycles? Only the long-range analysis of labor turnover and attitudes may reveal this.

As for the over-all benefits to mill management, I would like to mention a few comments from practical mill men on sales and production co-ordination and production planning. The owner of a large rayon throwing, weaving and finishing plant in the North with a weekly production of almost a million yards stated—"Our ability to keep close control over our sales and order position enabled us, in spite of the depressed situation of the industry as a whole, to keep operating at full capacity with a lower inventory of goods in process and finished goods than ever before."

Remember the peculiar situation of last year in woolen and worsteds, where orders had to be delivered on a very short notice? The manager of one woolen and worsted mill, also in the North, making hundreds of different styles in many different raw stock-dyed colors, said: "I was able to meet this situation by our ability to accurately plan production through a system of controlled co-ordination of sales and production." He said that without these controls, their inventory losses on the declining wool market would have been so great that he regarded these controls as a main contributing factor to enable his company to stay in business.

Planning and controls alone will not solve the difficult problems with which mill management is confronted today, but it will provide management with accurate facts, based on which the experienced mill man can make the right decision. I have tried to present some specific examples from the experience of our company on *why* production and sales co-ordination of the right kind is so essential to modern mill management today.

I do not want to give you the impression that there does not exist in many mills today some form of production and sales planning. Yet, let's be realistic about what you'll find. You'll find production-dominated planning—in which the mill technicians sit down, figure out what they can make, and tell the sales department what it has to sell. This kind of planning was the reason for one of the large Southern mills to accumulate millions of yards of unsaleable inventories just recently and caused the downfall of its management. You'll also find in other mills sales-dominated planning—in which the sales force tells the people in the mill what it wants them to manufacture on short notice, based on the everchanging market conditions and thus plays havoc with the manufacturing schedules and keeps the mill and its personnel in constant turmoil. Neither kind of planning is company-wide co-ordinated planning at all.

The aim of co-ordinated planning is to find the equation between the two factors, namely, sales and production—i.e., what kind of product the plant can make most economically and what kind of product the market will take most readily at profitable prices. It is the job of the co-ordinator to achieve agreement between the sales and the production

departments on the best production and sales program for the company.

To establish the market potential and the production potential requires very careful study. In developing a sales program, management must rely on the results obtained from market research and analyses and the statistical evaluation of past performances, and combine these facts with the intimate knowledge and long experience of the merchandising manager.

The determination of the manufacturing capacity requires good engineering know-how. Existing machinery and plant layout must be evaluated and compared with the latest technical developments to determine which products the plant can produce more economically and of superior quality to those of its competitors.

Once these facts have been established, a sales and manufacturing program is developed. This program has as its aim the constant utilization of the productive equipment with as few seasonal variations as possible, and with as small an inventory of raw materials and finished goods as possible.

This sales and manufacturing plan is the foundation for the successful co-operation between the sales department and the manufacturing department. It should be used as a yardstick against which actual developments are constantly measured. This is the task of co-ordinated control which keeps a constant watch on manufacturing schedules, mill balance, raw material in process and finished goods inventory and last, but not least, delivery schedules and promises.

But how rarely do you find this kind of co-ordinated control functioning accurately and instantly providing a clear, continually up-to-date, visual picture for top management? How often have you observed what happens when an inquiry for a big order comes into the president's office? Usually, you find that after studying some pieces of paper on his desk, he accepts the order and makes some delivery promises. That's usually when the trouble starts. To meet

the delivery date, the manufacturing schedule is thrown to the winds. Looms are stopped, production programs are changed, some departments work overtime, costs go to pieces and even sometimes warps are torn out—yet in spite of all that, the goods are usually not delivered on time. Believe me, there are many mills today that are still using these horse and buggy methods. I wonder how many of the poor financial showings of some of our textile mills are due to sticking to such antiquated methods.

Even though they have heard of production planning and sales co-ordination, too few people realize the developments that have taken place in this field in the last few years with developments of modern business machines, greatly improved management methods and systems, new statistical applications, and more scientific approaches to market research. With a properly developed, up-to-date set-up, this same president today can call his production and sales co-ordinator, and, within two minutes and 20 seconds flat—I have timed it myself—obtain the following information: (1) what machines are available for use; (2) at what rate and when the production will come off the machines; (3) what his raw material situation is; (4) what, if any, changes in production schedules must be made; (5) whether it will affect his costs and how much; (6) exactly when he can deliver the goods with the assurance that this delivery date can be kept without upsetting the mill and causing him further worry.

All this can be done without adding to red tape and the number of administrative personnel. It actually sets executive ability free and reduces friction and nervous tension between the manufacturing and sales people. The textile industry has a choice. It can arrive at its goal by proper planning, control and co-ordination; or it can flounder along aimlessly with hit or miss decisions and the seemingly easy way out. In one direction lies success and peace of mind; in the other lies ulcers and red figures on the profit and loss statement. Which shall it be?

## 'PERLON' In American Textiles

**A** LITTLE-KNOWN immigrant from the German synthetic textile field, perlon, is quietly but steadily finding its way into the American market. Although most Americans have never heard of perlon, it is being imported at the rate of about three million pounds a year, or roughly, at a rate equivalent to U. S. production of nylon as recently as 1939. American women are buying stockings made of perlon at retail stores all over the country and the German synthetic is being manufactured into garment, upholstery and other fabrics produced by integrated manufacturers such as Deering, Milliken & Co., J. P. Stevens & Co., and Burlington Mills Corp.

However, much of the past and present commerce in perlon has been shrouded in a strange secrecy and its future in the American market is something of a puzzle. In some trade circles it is considered quite possible that all supplies to the U. S. will be cut off on Dec. 31.

Perlon is not a new fiber. It was first produced during the years prior to World War II by I. G. Farbenindustrie

from Du Pont-developed "heavy molecule" theories which also led to nylon. Differences between nylon and perlon are largely technical; they are both noted for strength, abrasion resistance, and the ability to dry quickly. To a textile chemist perlon is simply "nylon 66" and the Du Pont fiber is "nylon 6," nylon being a generic term. Perlon may even be sold here labeled as nylon—without any objection from Du Pont. An official of J. P. Stevens stated: "We consider nylon and perlon indistinguishable."

Perlon's chief disadvantage in American markets at present is price. A pound of perlon staple has been whittled from about \$2 this Spring to \$1.75 now, partly due to a reduction of import duty. Importers of the German fiber think that eventually they'll be able to meet Du Pont's price of \$1.70. The current U. S. nylon shortage is perlon salesmen's best talking point. The only nylon producer in this country at present is Du Pont, which feels obligated to take care of military needs first and the hosiery industry (almost wholly dependent on nylon) second. What's left



may be made into such items as slips, dresses and shirts, or mixed into blended fabrics.

Thus, while the amount of perlon currently coming into the U. S. is but a small fraction of Du Pont's 16-million-pound annual output, it is big enough to take a lot of strain off some big blended fabric makers, for example, who heretofore have been dependent on "leftovers." A lot of these have been counting on nylon to help them get ahead in today's highly competitive markets. Says one: "I can sell 50 per cent wool-40 per cent rayon-ten per cent nylon cloth a lot faster than a 50 per cent wool-50 per cent rayon blend." He adds he can use perlon, call it nylon and do just as well. This man, like many of his fabric-making colleagues, is unaware that Du Pont holds certain U. S. patent rights which could be used to prevent sale of the German fiber here after the year's end. Simply stated, this is an explanation of the situation by a Du Pont executive:

In 1950, the U. S. Government asked Du Pont if it would help the Germans earn dollars by letting them export perlon to the U. S., a market previously closed to them by patent law. The corporation implied it would do so if the German Government were to recognize patents on the nylon process filed by Du Pont in Germany in the 1930s. If Du Pont could re-establish title to those patents it would be difficult if not impossible for a German firm to produce perlon (even for sale in Germany) without its approval.

Officials in Bonn agreed to recognize the patents and last year W. R. Swint, director of Du Pont's foreign relations department, signed agreements with eight West German textile firms, permanently licensing them to manufacture perlon under those German patents. Du Pont also gave the Germans temporary licenses to export perlon to the U. S. until Dec. 31, 1952.

The question of whether Du Pont will shut off the perlon supply when the temporary licenses expire is uncertain at present. Says a Du Pont spokesman: "So far the Germans haven't seen fit to come to us and discuss extension of the arrangement, which we think is rather strange." He adds that he doesn't think it's up to Du Pont to go to the Germans.

A check with perlon importers discloses a conviction that Du Pont won't try to halt imports of the fiber lest it incur the wrath of nylon customers who have come to rely on perlon also. And German perlon producers aren't throwing much light on the subject. Doctor VanBeek, a director of Farbenfabriken Bayer, in Dormagen, Germany, is reticent concerning the arrangement with Du Pont. Bayer is an ex-I. G. Farben "splinter" put back into business on its own hook by Allied decartelizers. Doctor VanBeek doesn't want to make Americans nervous; he insists the Germans aren't counting on making much of a dent in the U. S. nylon market. He estimates total perlon production in Germany at about 12 million pounds a year.

The first sizeable quantity of perlon shipped to this country arrived in mid-March, 1952. The fiber was manufactured by Bayer of Dormagen and distributed here by Thomas Hodges Corp., New York importer. Two other U. S. agents for German textile concerns are also in the business. They are Amicale Wool Service Co., Inc., of New York, representing Vereinigte Glanzstoff of Wuppertal and Nichols Fiber Co. of Boston for Kunstseidefabrik of Bobingen.

Since Spring, Mr. Hodges says, it has brought some 70,000 pounds of perlon into the U. S. and distributed it

this way: 20,000 pounds to Sydney Blumenthal & Co., Inc., for use in production of upholstery fabrics at its Valley Falls, R. I., plant; 25,000 pounds to American Yarn & Processing Co.'s mill at Mt. Holly, N. C., where it's being spun into 100 per cent perlon yarn; 15,000 pounds to Burlington Mills at Greensboro, N. C., and 10,000 pounds to Riegel Textile Corp. at Ware Shoals, S. C. Another 25 major mills are experimenting with its perlon, Hodges claims.

None of the companies which have been acquiring perlon from Hodges seems enthusiastic about talking details. Comments range from, "Do I have to talk for publication?" to Burlington's, "Sure we've been buying perlon, but Hodges exaggerates the total amount involved." The vice-president of one of the other firms buying perlon from Hodges states: "We still depend on Du Pont for 99 per cent of our nylon."

Thomas Hodges himself also runs Jefferson Color & Chemical Co., an import firm with headquarters in Kearns-ville, W. Va. Mr. Hodges says that Jefferson is planning to bring in another German fiber to compete with Du Pont's Orlon, which feels something like wool and is termed a "wool extender." He expects the first shipment of "Pan," as it's called in Germany, will arrive early next year.

His story is different from the one told by Cassella Farbwerke Mainku of Frankfurt, another ex-Farben offshoot which is the sole producer of Pan. An official of the company says Cassella has "no intention" of invading the U. S. market with Pan. At present Cassella is producing Pan in a pilot plant while building a large factory near Frankfurt expected to turn out close to three million pounds a year. Eventually it expects to license other ex-Farben affiliates to make the fiber.

Mr. Hodges claims to have "documentary evidence" that Cassella patented Pan early in the 1940s, long before Du Pont patented Orlon. He admits, however, that there's not much importance to his assertion since all German patents were made public property in this country shortly after World War II's outbreak.

The Amicale and Nichols import firms each are selling more perlon monthly now than the Hodges concern has distributed in total since March. W. D. Marx, Amicale's sales manager, estimates his firm is bringing in over 80,000 pounds of the fiber a month now. He's been supplying such textile manufacturing concerns as Deering, Milliken & Co., J. P. Stevens and United Merchants and Manufacturers, Inc.

United Merchants' head yarn buyer, Henry Birnbaum, says he's been buying perlon "in substantial amounts." He adds it's blended into sportswear materials to make them more resistant to abrasion. Deering, Milliken admits it's been buying the fiber, too, but won't say how much. Arthur O. Wellman, Jr., vice-president of Nichols, figures his company is bringing close to 100,000 pounds of perlon here every month. Mr. Wellman doesn't care to disclose who his clients are but comments: "We've been selling to some pretty big fellows."

So far the only perlon offered by Hodges, Amicale and Nichols has been staple. Hodges doesn't think it will be importing filament until the second quarter next year. The other two importers think probably they will follow suit shortly thereafter.

There's a campaign under way to increase U. S. nylon production and when it is completed the supply may be



much closer to demand than it is at present. The Defense Production Administration has encouraged the movement with fast write-offs to three big corporations, figuring the facilities covered will add 102 million pounds annual capacity to present 168-million-pound output.

Du Pont itself is expanding its nylon plants at Seaford, Del., Martinsville, Va., and Chattanooga, Tenn. Chemstrand Corp., jointly owned by American Viscose Corp. and Monsanto Chemical Co., has been licensed by Du Pont to pro-

duce nylon at Pensacola, Fla. That operation should get going late next year and be spinning yarn at a 50-million-pound-a-year clip by late 1954. Allied Chemical & Dye Corp. is formulating plans to produce a "nylon-type" yarn but it claims it doesn't know yet how much yarn it will spin or even where it will build the plant. Best information is that the Allied fiber will be based on the chemical "capro-lactam," which, oddly enough, is also the foundation for perlon.—Abstracted from *Wall Street Journal*.

## Latest Developments & Techniques Reviewed At N. C. State Conclave

**L**ATEST developments in cotton and synthetic-fiber spinning, weaving and dyeing, worsted spinning, and in new synthetic fibers were reviewed for nearly 200 delegates to the third annual alumni conclave in the School of Textiles, North Carolina State College, Raleigh, Oct. 24 and 25.

Speakers included Dean Malcolm E. Campbell, School of Textiles, North Carolina State College; Robert Dalton, Jr., Whitin Machine Works, Charlotte, N. C.; C. W. Bendigo, American Cyanamid Co., New York City; James Newnam, textile fibers department, E. I. du Pont de Nemours & Co.; C. Norris Rabold, Erwin Mills, Inc., Cooleemee, N. C., and president of the American Association of Textile Chemists and Colorists; and L. C. Sheehan, Bibb Mfg. Co., Macon, Ga.

Staff members of the School of Textiles, North Carolina State College, who addressed the group were William A. Newell, research co-ordinator; Prof. E. B. Grover, head of the yarn manufacturing department; and Prof. Joseph A. Porter.

In his paper on the "American System of Worsted Spinning," Robert Dalton, Jr., announced development by Whitin Machine Works of a new machine called the Roto-Drafter. The machine is said to give mills greater flexibility than that obtained by use of pin drafters. The new machine, unlike the pin drafter, can process short fibers as well as fibers up to seven inches in length. The Roto-Drafter was said to resemble a drawing frame and uses conventional-type top rolls in processing fibers under 2½ inches. When longer fibers are processed, some top rolls are replaced by a rotary comb. Mr. Dalton claimed that the machine was capable of higher production rates than the pin drafter, and that maintenance costs were lower.

The machine has the appearance of a heavy drawing frame, he explained, but the drafting system has five bottom rolls and a set of top rolls that work in conjunction with a rotary comb. Set up in this manner, the machine is designed to take up to seven-inch staple. By making a simple adjustment, however, and replacing the rotary comb with a large diameter top roll, the machine is immediately converted from a gilling machine to a drawing frame, he said.

"Operating as a gill," he continued, "this machine is expected to have about 30 per cent more production than the ordinary pin drafter on the market today." Maintenance

cost also will be considerably lower than that of the pin drafter, as the latter in some mills amounts to about \$35 a month, Mr. Dalton said.

Mr. Dalton said earlier that the main objection of mills using the American system is that "it is not quite flexible enough. Most mills found they cannot use staple less than about 2½ inches long on the pin drafter, and we have not been able to successfully handle staple longer than about four inches on our standard drawing frame."

Development of the American system of worsted processing and improvements made in recent years were traced by Mr. Dalton. In the early stages, he recalled, and because three processes of drawing were employed, topmakers were forced to keep fiber length to about 2¾ inches. This was not always done, he said, and mills had trouble with "broken fibers." Then the Warner & Swasey pin drafter was introduced and it unquestionably gave the American system "a big lift," Mr. Dalton observed. The firm has improved the functioning of American system machinery so that it now can process worsted and synthetic fibers up to seven inches long, it was stated.

"The real success of this system depends largely on the use of double aprons to control the variable length staples in 100 per cent worsted or a worsted-synthetic blend," the company's representative declared. Furthermore, he asserted, the new man-made fibers have a substantial resiliency, or puffiness, and the two-apron system provides better control of the fibers during the drafting operation, it was stated.

Heavy top-roll weight is required when drafting extra-long fibers to produce uniform slippage, making it necessary to increase weight several times over that recommended two or three years ago. Total top-roll weight on roving is 175 pounds, Mr. Dalton pointed out. This has resulted in the redesigning of roll stands, weighting mechanism and roll diameters.

The present Whitin Superdraft roving frame is equipped with new-type inclined roll stands, with maximum spread of 14 inches front to back, and is mounted on a 30-degree incline, whereas formerly the roll stand was parallel to the roller beam, it was noted. Another important change in design of the roving frame is the knurled top roll that drives the top apron. Through use of a hollowed-out or recessed roll on the second line of top rolls, "excellent

results" were obtained in sample runs on extra-long fibers, the Whittin agent remarked. This roll, with recess only .050 inches on the diameter, has become standard when processing fibers longer than three inches, he said. Average roving drafts run from 12 to 18 but good results with drafts as high as 24 have been observed, Mr. Dalton declared.

Other improvements on the roving machine include the use of spring weighting, a new type of spring force having been recently developed, and an increase in diameter of the front bottom rolls, previously  $1\frac{3}{8}$  inches, to two inches and corresponding increase in back bottom and the top rolls. The four lines of bottom rolls are equipped with anti-friction bearings, reducing wear that would be expected on the roll necks when using heavier top-roll weights, it was mentioned.

The spinning frame used in the American system is equipped with type "RW" long draft. Mr. Dalton pointed out that it has many of the same improvements made on the roving frame. Roll diameters and top-roll weights were increased, but only three lines of bottom rolls are used whereas there are four lines in roving. Maximum spread from the bite of the front roll to that of the back roll is nine inches, and generally total top-roll weight of 125 pounds is used—about 80 on the front line, ten on the second and 35 on the back. While it has been found satisfactory not to draft more than 14 on worsteds, some mills apparently are getting good results in drafting about 20 to 22 on the long-staple man-made fibers, Mr. Dalton observed.

About 290,000 American system spindles currently are in operation, it was said. "A number of American system units in operation today are running with a loss of less than  $3\frac{1}{2}$  per cent waste, while it is not uncommon to find twice this amount in some of the older Bradford system mills."

Mr. Dalton also described a model American System worsted mill that could produce 322 pounds of yarn per

hour with 28 workers at a cost of about  $9\frac{1}{2}$  cents per pound. Mr. Dalton also stated that by far the majority of new worsted equipment being installed in the South is American system type.

In discussing reports of mill applications of the high-production cotton carding research done at the School of Textiles, Mr. Newell said that ten mills had reported card-production increases averaging 54 per cent. The results covered mills in North and South Carolina, Georgia and Alabama. Cottons processed ranged from one inch to  $1\frac{1}{4}$  inches, and yarns spun were of carded and combed types ranging in counts from 10s to 60s. The size of the mills reporting these increases ranged from 6,000 to 110,000 spindles, and one mill estimated the saving made at \$132,000 in one year.

Mr. Newell further stated that a preliminary study of failures to achieve optimum results in applying the recommendations of the study indicated that many mills had not applied all the recommendations. Several mills had tried speeding up the card lickerin only, for example, with the result that neps were increased. Other mills had not paid sufficient attention to the recommendations as they applied to opening, picking and condition of machines.

Although the results of the study have been public only six months, ten mills having a total of about 350,000 spindles have reported increases in carding production averaging 55 per cent, reductions in the number of neps produced in manufacturing, and in some cases, better yarn quality. Other mills are still in the process of applying the results. Specific results reported by ten mills to the School of Textiles are as follows:

#### MILL A

Cotton used:	1-in. SGO, 1-in. LM, 15/16 SLM, and strips
Yarn numbers spun:	10s
Card production—	15.7
Lb. per hr. before changes:	25.3
Lb. per hr. after changes:	66%
Per cent increase:	Slight strength increase
Effect on yarn quality:	



Factors involving new processing and production methods for the textile industry were outlined at the third annual alumni conclave in the North Carolina State College School of Textiles Oct. 24 and 25. Pictured here are five of the textile experts who appeared on the program. They are observing a piece of worsted top, an intermediate product of worsted yarn spinning. Left to right: James Newnam, customer service department, E. I. du Pont de Nemours & Co., Wilmington, Del.; William A. Newell, research co-ordinator in the School of Textiles, North Carolina State College; Robert Dalton, Jr., Whittin Machine Works, Charlotte, N. C.; Prof. Joseph A. Porter, School of Textiles, North Carolina State College; Dean Malcolm E. Campbell of the college's School of Textiles; C. W. Bendigo, American Cyanamid Co., New York City; and Prof. E. B. Grover, School of Textiles, North Carolina State College.

### MILL B

Cotton used:  
Yarn numbers spun:  
Card production—  
Lb. per hr. before changes: 18  
Lb. per hr. after changes: 30  
Per cent increase: 66%  
Effect on yarn quality: Higher strength  
Remarks: Some comb-box trouble at high speed, but ball-bearing comb boxes not used. Also cancelled planning for \$45,000 worth of new carding equipment for mill expansion.

### MILL C

Cotton used: 84% 1 3/32-in. SLM, 16% 1 1/16 in. SM  
Yarn numbers spun: 40/1  
Card production—  
Lb. per hr. before changes: 14.5  
Lb. per hr. after changes: 14.8  
Per cent increase: None  
Effect on yarn quality: No significant change  
Remarks: Neps reduced 21%

### MILL D

Cotton used: 1 1/4-in. middling  
Yarn numbers spun: 60/2  
Card production—  
Lb. per hr. before changes: 4.5  
Lb. per hr. after changes: 6  
Per cent increase: 33%  
Effect on yarn quality: No change

### MILL E

Cotton used: 1-in. SM and 1 1/16-in. SM  
Yarn numbers spun:  
Card production—  
Lb. per hr. before changes:  
Lb. per hr. after changes:  
Per cent increase:  
Effect on yarn quality:  
Remarks: Improved quality  
Almost 400 cards operating on new speeds and settings.

### MILL F

Cotton used:  
Yarn numbers spun: 12s to 40s  
Card production—  
Lb. per hr. before changes: First set—7.75 Second set—10.00  
Lb. per hr. after changes: First set—9.00 Second set—13.00  
Per cent increase: 30%  
Effect on yarn quality: No change  
Remarks: "Our basic problem has been to get people to accept the findings rather than desire to continue on the standard basis."

### MILL G

Cotton used: 1-in. low grade and strips  
Yarn numbers spun: 16s  
Card production—  
Lb. per hr. before changes: 12  
Lb. per hr. after changes: 25  
Per cent increase: 105%  
Effect on yarn quality: Higher strength  
Remarks: Have installed 15-in. silver cans.

### MILL H

Cotton used: 1 3/32  
Yarn numbers spun: 36/2  
Card production—  
Lb. per hr. before changes: 7  
Lb. per hr. after changes: 11 1/2  
Per cent increase: 64%  
Effect on yarn quality: No change

### MILL I

Cotton used: 1 1/8-in.  
Yarn spun: 40s  
Card production before recommendations applied: 9 lb. per hr.  
Card production after recommendations applied: 13 lb. per hr.  
Per cent increase: 66%  
Effect on yarn quality: Improved.

The mills range in size from 6,000 to 110,000 spindles. The three-year research project was sponsored by the U. S. Department of Agriculture and was supervised by the Southern Regional Research Laboratory in New Orleans. Prof. J. F. Bogdan, director of processing research at the School of Textiles, North Carolina State College, directed the research project, and was assisted by Associate Professor Ivan Y. T. Feng.

Professor Grover reported on the meeting of the Textile Institute in Edinburgh, Scotland, last Summer. He mentioned that much work is being done in England on fiber blending methods and that several new machines for this purpose are now under development. He reported on one paper that pointed out it was important to get separation of

individual fibers in processing blends so as to prevent the accumulation of masses of fiber that will detract from yarn appearance.

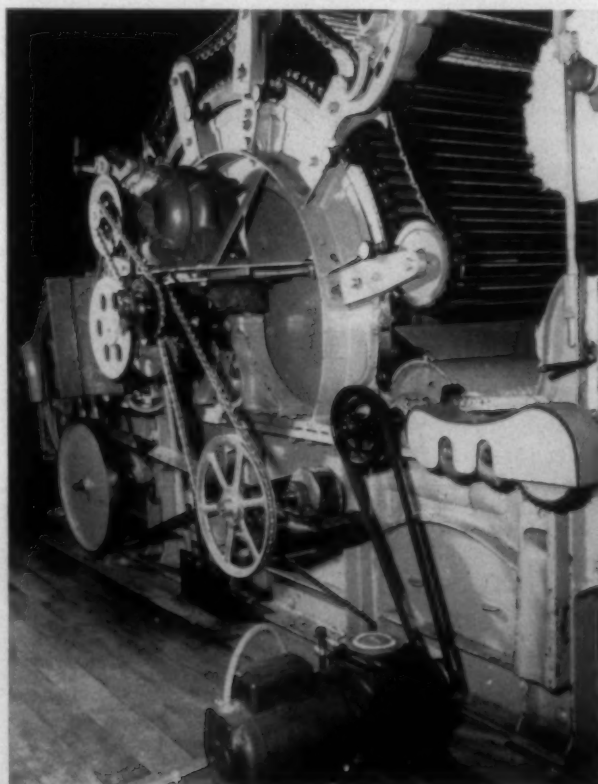
He also reported on studies which showed that various fibers in blends will load on the card at various rates and thus affect the ultimate percentages of each fiber in the final yarn. For example, in a 50-50 viscose-acetate blend card strips will contain 70 per cent acetate.

In his talk, Mr. Sheehan pointed out ways and means of increasing uniformity in picking. He also stated that his company is reducing the number of processes in the processing of yarn. He emphasized the importance of a control chart in making a more uniform product. His topic was "Control of Fiber Picker Lap Variation."

Professor Porter, who has recently returned from a Mutual Security Administration assignment in Europe, said the European textile industry is "a full 20 years behind what we are doing in this country." He said European garment manufacturers can import fabrics from America cheaper than they can get them from neighboring countries. During his European tour, Professor Porter said he saw only one circular loom and it was not in operation because it was regarded as impractical.

Acrylic fibers were discussed by a panel consisting of C. W. Bendigo of American Cyanamid Co. and James Newnam of E. I. du Pont de Nemours & Co. Mr. Bendigo pointed out that acrylonitrile, basic raw material for the fibers, is constantly being produced in larger quantities, and that prices are constantly becoming lower.

Mr. Bendigo labeled 1952 as the acrylic fiber year. He supported this statement by pointing out that Dynel, Orlon and Acrilan are now in commercial production, and that small-scale X-51 commercial production would start in the near future. He also pointed out that a new type of Dynel



Side view of one of the cards used in the nep reduction project at North Carolina State College School of Textiles.



was coming along shortly. Four other producers have fibers in the commercial testing stage, and that possibly still three or four others are working on a fiber of an acrylic type that has not yet reached the testing stage. He pointed out that X-51 acrylic fiber would be used mainly in staple form, and that few changes are needed to process them on commercial equipment. Speaking specifically for X-51, Mr. Bendigo advised processors to keep twist multiples low, to allow for the extra bulk of the fiber in processing, and possibly to use slightly wider settings in opening and picking. He pointed out that slashing, thus far, had not presented any problem. Mr. Bendigo also mentioned that one Southern mill had made a trial run of the fiber and produced yarn successfully without making any changes on their equipment set for cotton except for opening up the setting of the Kirschner beater on the picker.

Mr. Newnam, after mentioning that Camden, S. C., Orlon plant would soon reach full production, discussed the properties and potential markets for Orlon. He recommended that a few changes be made in processing, such as using slower beater speeds and wider settings in opening and picking. In carding, a lighter sliver should be produced, and as little twist as possible should be used in

roving. Mr. Newnam recommended that yarn be made about 25 per cent lighter because of the extra bulk of the acrylic fiber.

Mr. Newnam also spoke on high production carding of nylon staple. He outlined the work that had been done on improving the carding of three-denier nylon at the department of research at the North Carolina State College School of Textiles. He mentioned that as a result of this research, many mills throughout the South had tripled card production by processing nylon staple and had lengthened their stripping cycle to as much as 80 hours. He reported that the details of this study were in the process of being published at the present time and would be available generally in the near future.

C. Norris Rabold discussed new and interesting developments that were present and coming along in wet processing. Mr. Rabold mentioned that such dyeing processes as the hot oil process and the molten metal processes seemed to be the coming thing in dyeing. He also mentioned that the surface had hardly been scratched on development and use of embossed fabric, and also stated that much exploration work needs to be done in blending cotton with the synthetic fibers.

## It's Now The North Carolina Textile Manufacturers Assn.

**N**ORTH CAROLINA textile manufacturers last month dropped "cotton" from the official name of their 46-year-old trade association, and voted to change the organization's name to the North Carolina Textile Manufacturers Association. The change, indicative of the textile industry's diversification in North Carolina, was made Oct. 17 during the association's annual meeting at Pinehurst, N. C.

Other major business of the convention included election of officers and directors, rejection of a proposal by cotton shippers to change selling regulations on cotton bought for forward shipment, and recommendation that an additional specification be included in the rule governing weight allowance on bales wrapped in cotton bagging.

H. K. Hallett, of Charlotte, vice-president and general manager of Kendall Mills, Gray Cloth Division, was elected president of the North Carolina Textile Manufacturers Association, Inc., at the closing business session of the annual meeting. The past year's first vice-president of the association, Mr. Hallett, succeeds Carl R. Harris, vice-president and assistant treasurer, Erwin Mills, Inc., Durham.

E. N. Brower, president of Rockfish-Mebane Yarn Mills, Inc., and Brower Mills, Inc., Hope Mills, formerly second vice-president, was elevated to the first vice-presidency, and W. H. Suttentfield, vice-president and sales manager, American & Efrid Mills, Inc., Mount Holly, was elected second vice-president.

Elected directors for three-year terms were: Gordon A. Berkstresser, vice-president and general manager, Rosemary Mfg. Co., and vice-president of Patterson Mills Co. and Roanoke Mills Co., all at Roanoke Rapids; Jack C. Childers, treasurer of Erlanger Mills, Inc., Lexington, vice-president and treasurer of Leward Cotton Mills, Inc., Worthville, and vice-president of North Carolina Finishing Co., Salisbury; N. A. Gregory, assistant secretary Erwin Mills, Inc., Durham; Don S. Holt, vice-president, Cannon Mills Co., Kannapolis; J. A. Long, Jr., treasurer, Roxboro Cotton Mills; and Frank F. Willingham, vice-president, Indera Mills Co., Winston-Salem.

Mr. Hallett is now first vice-president of the American Cotton Manufacturers Institute, and if precedent is followed, he will move up to president of the A.C.M.I. at its convention in Palm Beach, Fla., next Spring.

At its final business session the convention rejected the amendment to Southern mill rules proposed several months ago by representatives of the American Cotton Shippers Association, asking that Rule No. 48 be amended to read that "the price on 'on call' sales shall be fixed on any market day not later than the day preceding the first notice day of the month upon which the price is based or the first day of the month or period of shipping, whichever is earlier, unless an agreement is reached by the buyers and sellers to extend or change the time when the price shall be fixed."

Mill men felt the change would interfere with contrac-

tual arrangements between mills and shippers. The present rule stipulates that, unless otherwise specified on cotton purchased for forward shipment, the buyer has the privilege of fixing the price at any time up to the first notice day for the month on which the price is fixed, with seller's option thereafter. The rule prescribing that buyers make an allowance to sellers of seven pounds for each bale packed in cotton bagging, was altered to provide that this be in accordance with U. S. government specification, because, it was claimed by some, certain sellers are asking for a weight allowance on bales wrapped in camouflage nets and similar bagging.

Mr. Harris, retiring president of the association, pointed out in his address that New England isn't the only area that has been losing cotton textile spindleage, and that North Carolina has also been witnessing a shrinkage, whereas other cotton-growing states have been gaining in spindles. The industry's active spindles reached a peak in 1923, Mr. Harris pointed out, and since that time, up until August of 1952, there has been a 25 per cent reduction in active spindles in the whole industry.

In New England, Mr. Harris continued, the reduction has been 84 per cent, while in the cotton growing states the increase has amounted to 3.7 per cent and in North Carolina there has been a decrease of 3.6 per cent. He said that "heavy local and state taxes and immoderate outside pressures" have undoubtedly contributed to the immense migration in the textile industry to the Southeast in recent decades, and added:

"Any industry with as many different units as ours (over 1,000), naturally finds competition ruthless. For this reason if any unit or segment allows itself to get out of line, in direct or indirect costs, it is facing sudden economic strangulation." Mr. Harris warned that the industry must find means of achieving operating and earning records stable enough to attract venture capital or possibly witness its productive capacity dwindle to the danger point.

The industry, he pointed out, is vital to the welfare and security of the country and must have productive capacity to meet both normal and abnormal demands, yet this very fact leads to periodic ups and downs. Citing the recent prolonged textile depression, from which the industry may now be emerging, as the worst probably in all experience, he asserted that textiles can expect to be faced at times with



Speakers at the Pinchurst meeting of the N. C. Textile Manufacturers Association were (left to right): Carl R. Harris, Morris Sayre and William B. Umstead.

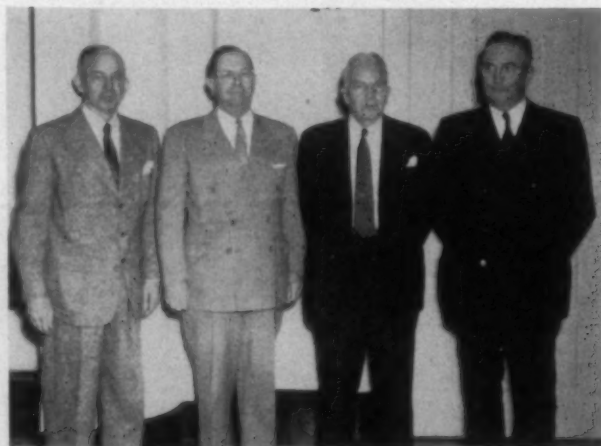
chaotic conditions "unless we learn to control and regulate our productive facilities to current demands. In our endeavor to try to stem this adverse tide, we too often fell into the error of thinking that our best interests could be served by trying to level out production by fluctuating prices, instead of leveling out prices by fluctuation," he added.

The earning record of the industry has always been a feast or a famine, with the famine periods most prevalent, he added. "When the demand for our products picks up it is a natural instinct to try to gain an advantage by going to six day operations and to start up third shifts where it is not already the practice," he said. "It would seem a better part of sound judgment to realize that others are going to do the same thing, and that soon the goose that laid the golden egg will be slain."

Corn Products Refining Co. recently completed an integrated textile pilot plant assembly at the Mellon Institute in Pittsburgh in order to be better equipped for the development of sizings of all types, according to Morris Sayre, vice-chairman of the board. "No industry can afford to leave basic research to others, and each must have its own comprehensive program," he continued. A measure of how much basic research is needed, it was felt, was whether the cotton industry "is creating its fair share of the advancement of human knowledge." Mr. Sayre asked if the industry's program was well integrated and supervised, and whether it provided for proper development of technical personnel and stimulation of sympathetic interest of college scientists in the industry's problems. Waste standards, cost reduction, quality improvement and supervisor training are important parts of production, "but they have to be sold in the mill," the speaker declared.

William B. Umstead, governor-elect of North Carolina, discussed the top role the textile industry plays in the state's economy, reminding that it has 6,100,000 spindles and that 60 per cent of the textile manufacturing industry is located in the Carolinas. This state leads in the weaving of fabrics from man-made fibers, Mr. Umstead noted. He spoke of mills' contributions to community hospitals, improved safety programs in plants and establishment of loan funds for employees. North Carolina mills donated more than one million dollars for added facilities at the textile school at N. C. State College, he said.

A resolution of respect to Kemp P. Lewis, chairman of the board of Erwin Mills, Inc., who died during the past year was adopted by the association's membership. Mr. Lewis served as president of the organization in 1932.



Left to right: Hunter Marshall, secretary and treasurer of the North Carolina Textile Manufacturers Association; Carl R. Harris, immediate past president; H. K. Hallett, 1952-53 president of the association; and E. N. Brower, first vice-president.

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# THE MILL OF TODAY

By ROBERT Z. WALKER

### Part 35 – Builder Maintenance

**I**N the last section the common types of bobbin winds were discussed and instructions given to act as bench marks in setting the builder to obtain them. The instructions were more explicit and detailed than has been the usual practice in past portions of this series because of the desire to stress the importance of setting builders accurately and in accordance with tried and true principles. While the instructions cannot be followed to the letter with every type of builder, the modifications necessary to adapt the method to the particular frames in the mill are minor and easily understood. If the basic system of builder setting is applied in every-day operation of the spinning room, and especially if the accuracy and care stressed in the discussion is made an integral part of routine builder setting, then it is felt that the improvement in waste control and general spinning room conditions will become self-evident. Accuracy, with a sound method as an important secondary factor, will guarantee the building of good bobbins on frames in the proper mechanical condition.

The underlying theme of this discussion will be centered on the inspection of the frame and on the use of bobbin analysis to determine causes for the building of poorly-wound bobbins. An analysis of the condition, when poor bobbins begin to appear, should commence with a careful inspection of the bobbin itself to attempt to determine the cause of the trouble. There are two main classifications of conditions which could cause poor bobbins, insofar as locating and correcting the trouble. The first of these occur when the builder and lifter motion are mechanically functioning without fault, but the settings of the builder or at the bobbin are at fault. In other words, there is not any malfunction but merely a need for readjustment of some part of the bobbin building section of the frame. The second type of condition exists when the builder or lifter motion is not functioning correctly. In this case there is a need for mechanical remedies rather than adjustment.

A good question which every mill man should ask himself is, "Am I taking full advantage of the ring size and bobbin length of my frames?" He should then go out into the spinning room and the winding room and start picking up sample bobbins from the production run. The point of this inspection is concerned with the over-all operation of the room. Are the bobbins the same from one frame to the next? Are the bobbins seating to the same height on each frame? Are the tapers unnecessarily long just for the sake of a wide margin of safety and therefore cutting down the full package load drastically? Are the bobbins being filled to the full diameter permitted by the ring, or are the frames being doffed too frequently? Is the full length of the traverse of the frame and the package carrying length of the frame being utilized? When these questions can be answered factually by the mill man,

and when the bobbin is filled to the maximum while still allowing a sufficient margin of safety, then, and only then, will he know that the ultimate in production is being gained in the spinning and winding room.

After the maximum bobbin size has been decided upon the attention of the overseer and his crew of fixers should be turned toward setting all of the frames identically. Now is the time in which the analysis of the individual bobbins becomes important in determining quickly and exactly what is the cause of any divergence of the bobbins from any frame from the standards which have been set up. If the taper of the bobbin is too long then the procedures outlined in the last discussion should be followed. If the bobbins have the proper degree of taper but are too short, then the stroke of the builder will have to be changed. If the bobbin is correctly proportioned but is too small in diameter, then the picks per traverse will have to be altered. In any of these cases, however, the analysis will quickly show that the bobbin build is essentially correct and requires but minor adjustments of the builder mechanism to make it conform in all respects to the dimensions of the standard bobbin.

All of the above bobbins will have certain characteristics in common. The yarn will be wound on the bobbin smoothly and tightly. There will not be any ridges or sunken spots to break up the smooth contours necessary for unbroken unwinding at high speeds. The lay of the yarn on the bobbin will be correct for the count of the yarn. The bobbin will feel firm when squeezed, indicating a close lay and the use of a traveler heavy enough to lay the coils tightly around the bobbin.

The other main classification of bobbin difficulties lies in type of trouble which will crop up at odd intervals to plague the overseer and the fixers. These troubles will be caused by the failure of the mechanism of one frame and will be wholly mechanical in nature. In other words, the



A builder assembly set for warp wind. Note the warp rack in place and the provision made for the filling chain drum.

bobbins will be off-standard from the dimensions and conditions which have been adopted by the mill.

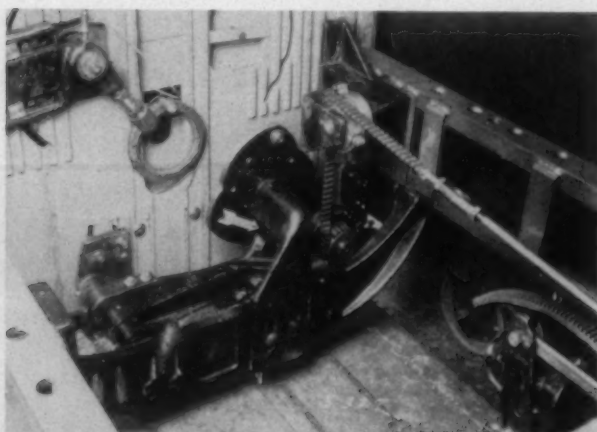
Generally, but not always, the matter will be brought to the attention of the fixer and the overseer because the bobbins have a poor appearance or because the faults are easily seen. One of the common complaints is that the bobbin develops a bunch of snarled yarn, or tangled yarn at the nose. This tangle may be noted in the spinning room, although in many cases the sloughing does not become apparent until later.

Snarled bobbins are the result of many of the malfunctions of the spinning frame. The primary cause is due to an irregular, erratic movement of the ring rail which piles the yarn on one spot of the bobbin and leaves a hollow elsewhere. Any sticking or binding in any part of the builder motion or lifter motion will cause or contribute to the momentary dwell of the ring rail. Generally, a snarled bobbin will be caused by a dwelling of the ring rail at the top of the traverse, which deposits a large bunch of yarn at the top of the bobbin. The yarn at this point is in the tapered portion of the bobbin and on a small diameter where it is more conducive to slippage under the stress of later processing and handling. Sticking of the ring rail at other points of the traverse are not as harmful in that the bunch which is formed is not as liable to slip over the nose of the bobbin to cause a snarl.

Any interference or binding of any part of the builder and lifter motion will cause dwellings of the ring rail. Among such causes are builder weights striking the spindle rail, builder racks striking the spindle rail, the hook or filbow of the builder chain striking the pulley in the cradle stand, the rivets of the chain riding on the edge of the pulley flanges, or the head end connecting rod binding at the hook.

The cradle stand may sometimes be responsible for interferences which are puzzling to the fixer and difficult to detect by watching the frame. However, if the ridges of yarn are on the taper, it may be because the cradle stand is binding and does not swing freely, preventing a uniform movement of the rocker arm. If the cradle stand is set too high in relation to the segment arm the chain may rub on the cradle. This type of interference will cause a hollow to be built into the side of the bobbin.

Balance weights which are not correctly adjusted are a



Back lash or lost motion anywhere in the intricate builder motion or lifter motion will cause the ring rail to move unevenly and to build poor bobbins.

common cause of interference. If the weights strike the floor or the samsons they will cause a dwell of the ring rail when at the top of the stroke. When the weights are set too high they will cause interference with the connecting rods, resulting in a dwell of the ring rail when at the bottom of the stroke. When the screw on the end of the chain is not properly fitted and tightened in place on the filling drum, there is a possibility that the chain will slip off of the drum when the frame is brought down for doffing. When the frame is restarted the ring will not be in the correct position and the whole set of new bobbins will be spoiled. This may be avoided by setting the screw eye so that the chain will lead centrally around the drum gear and not off of the outside edge of the drum.

Separators out of place or set incorrectly will also prevent the smooth operation of the ring rail and will cause bunches on the bobbin. A separator blade which becomes loosened and out of place—and they will unless periodically checked—may strike the thread board and prevent the completion of the traverse of the ring rail at the top of the stroke. Ring rail separators which are too high may cause the separator bars to strike the thread board hinges; this will cause the ring rail to dwell at the top of the stroke. If Rhodes Chandler type separators are set too far back, the separator blades will interfere with the thread boards and will retard the ring rail at the top of the stroke.

Generally, the first thing to look for when a frame is making snarled bobbins is the balance of the ring rail. A very common cause of snarled bobbins is an overbalanced ring rail that moves under strain, and therefore with an erratic motion. In many cases it will be found that the trouble will be the result of binding produced by an accumulation of oxidized oil and collected lint on the lifter rods. Often it has been found that the fixer will note that the ring rail is moving under strain, but instead of finding and correcting the root of the trouble will apply the remedy of moving the weights further out to increase their leverage and power. The extra weight will overcome the resistance of the binding. However, soon the lint and oil on the lifter rods will increase the resistance and will require still further adjustment of the weights. A vicious circle is started that will continue until finally the rail becomes so overbalanced that it becomes difficult to lower. The unnecessary strain that is applied to the builder chain, builder, and the entire lifter motion brings about a slow change of direction at the top of the traverse. As this period of hesitation becomes longer, more yarn will be piled on the top of the bobbin and there will be more trouble with more snarling of bobbins. When trouble of this sort is discovered, the only remedy is to clean all of the lifter rods and bushings and to readjust the balance weights. When this is done the entire lifter motion should be examined to determine if further adjustments are needed or if replacement parts are required to substitute for parts which have been damaged by the excessive strain that has been placed upon them.

The problem of snarled bobbins again brings up that important point—the taper of the bobbin. Tapers that are too short will result in snarling of the bobbin and therefore it is advisable to place less yardage on the bobbin rather than to fill the bobbin to the point that snarling becomes evident. A balance has to be struck between the loss of yardage and the excess of waste and lost time caused by bad bobbins, as tapers which are too long result in an unnecessary loss of yardage. If a warp wind is used, then



it may be possible to increase the yardage to a reasonable limit by reducing the number of picks. When a filling wind is being used, then snarling may be avoided by speeding up the rail to create a more open wind. In this case, less picks will be required. Uneven lengths of points on a filling cam is not thought to be a remedy for bobbins which snarl at the top, as the condition still exists but snarling is prevented in most cases as this type of cam throws an unevenly spaced binder thread over the bottom shoulder of the taper. At the same time, it may be noted that a worn point on the warp cam does not cause a dwell at the top of the traverse and therefore is not responsible for bobbins snarling at the top. However, a worn point will cause a ridge to be built up on the bottom taper.

In cases where a filling wind is used with a large ring the number of picks will necessarily be small to fill the bobbin diameter. In this case, it is not recommended that the number of picks be reduced further. However, if snarling is occurring, the rail may be slowed down by using a smaller lay gear and more picks may be added. Another suggested method is to use a single worm on the vertical shaft if a double worm is on the frame. This substitution will permit changing the lay gear or adding more picks, depending upon the conditions. The change from the double to the single worm provides a greater range of application of gears and picks and more latitude in corrective measures.

Bobbins which are wound either too high or too low rank next to that of snarled bobbins in order of common complaints. The most common cause of bobbins which are wound too low is a direct result of the habit of doffing the rail too low. The low position of the ring rail allows the yarn to be wound on the cone of the spindle blade. This yarn which accumulates on the cone of the spindle will not allow the empty bobbin to travel to its proper position on the blade. As the bobbin is too high on the spindle, the yarn will be wound on it starting at an excessively low position. This will also tend to cause bobbins to rise on the spindle when the frame is in operation. The proper position of the rail when ready for doffing is at a point where the yarn will be wound on the bobbin just below the bottom of the traverse, and the doffing latch should be set so that it will lock the rail at that exact point and no further down.

Bobbins which are found to be wound either too high or too low may sometimes be caused by poor fit to the spindles. Worn bobbins will seat too low on the spindles and will

cause the yarn to be wound too high on the bobbin. Worn bobbins may be noted on the frame by the vibration which is set up when the spindle is rotating with a partially loaded package. Low winds will also be caused by bobbins that are seated high on the spindle due to having the hole in the bobbin clogged with waste cotton or lint. Such bobbins should be cleaned by either blowing out with compressed air or by using a cleaning wire having a screw eye attached to the end.

A less common defect found in the building of a warp bobbin occurs when a ridge is formed on the top of the bobbin during the winding of the first few layers of yarn. At first glance it would generally be assumed that the ridge has been caused by the use of an insufficient number of picks. However, in this instance, the bottom taper will be found to be correct and this indicates that the picks are not responsible for the ridge at the top. By careful observation when pulling the yarn off the bobbin slowly, it will be found that the second layer has been wound above the first. As the bobbin is unwound, this condition will be found to exist on each layer, when on the correct bobbin each succeeding layer will be lower on the bobbin. When the bobbin is correctly built, the layers will be shortened on the warp wind, as the movement of the rack towards the builder stand shortens the effective leverage of the builder arm. This reduction in effective leverage reduces the stroke and so causes the layer to be shorter than the preceding one, producing the correct taper at both ends of the bobbin. The placement of the layer is equally as important as the reduction in the length of the stroke or traverse. If the builder and cradle stand are set in the correct position and the ridge is still formed at the top of the bobbin, it is an indication that the starting position of the rack is incorrect. The corrective measure which should be taken is to readjust the stop screw so that the starting position of the rack will be nearer the builder stand.

The essential point to remember is that the movement of the ring rail determines the building of the bobbin, and that the movement of the ring rail is determined primarily by the movement of the cam and builder arm. However, between the builder and the ring rail are a large number of members which transmit this motion. Any backlash, wear, or binding at any point will disrupt or distort the following movement of the ring rail as dictated by the builder and cam. The only remedy is to keep the entire lifter motion and builder assembly in a smooth-running condition, sensitive to the movement of the builder.

## LAGS

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WORKER  
STRIPPER  
MAIN CYLINDER

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C  
K

## PINS

SLAT  
CARD  
PICKER  
CYLINDER

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# Warp Preparation & Weaving

## SO YOU WANT GOOD CLOTH!

By FRANK D. HERRING

### Part 40 — Training Loom Fixers

**T**RAINING loom fixers is a subject which covers a very wide range of technical knowledge. That is why I have mentioned more than once in this series of articles that I consider loom fixing the weakest link in the cotton manufacturing chain. I realized early in my career in the weaving game that the above was true, and I have always since put special emphasis on this subject, and after some 40-odd years in the weaving end of the business I more than ever am convinced that my early impressions were correct.

I have trained many loom fixers, and my work for the past few years has been almost completely confined to this work. I like the work for two primary reasons—first, I like to work with machinery, and second, I like the pleasure of accomplishment which one gets from doing a tough job well. And in the weaving of various fabrics which we are called upon to make to meet modern demands, and trying to keep abreast with the many improvements and necessary changes in the weaving machinery we are faced with a constantly tough job.

Training loom fixers does not mean that I, or any other one person, can take a trainee under his charge and teach him all there is to know about fixing looms, because no one man has learned that much. If I did not realize that fact I would immediately put away my tools and get out of the business for good, because that would be a sure indication that I was all washed up and had ceased to realize that there was still progress to be made, and many things still to be learned.

Through actual work and practical experience I have concluded that the instructor can give the trainee only the basic fundamentals in fixing looms, and of course this is necessary if one is ever to become a good loom fixer, and then put the trainee on a section of looms and give him enough aid to enable him to maintain confidence in himself and then turn him loose and allow him to go on his own; but be sure to impress the fact on him that it is no disgrace to call for help, because he will surely need some help as time goes on if he ever becomes, and remains a good loom fixer.

In recent articles I have been dealing with some of the unusual, and difficult jobs which the trainee will encounter after he is put on a section. I was recently called upon to check a loom which was failing to transfer the bobbins into the shuttle properly. Most of the bobbins were being trapped in the shuttle and the picker stick slot in the lay, and a majority of them were being broken, and occasionally one would be carried out between the warp sheds and make a breakout in the warp yarn. I went and checked over the

entire filling motion and transfer mechanism, and made some adjustments, and I left the loom running, thinking it was all right. In about an hour the overseer came and told me that the loom had trapped another bobbin. I knew then that something very unusual was causing the trouble, and I found the following to be the cause of the trouble. The small end bobbin disc was not properly adjusted, and the holders did not put sufficient pressure on the small end of the bobbin to hold the butt ends of the bobbins securely against the bobbin disc; when transfer was made and the feed pawl moved the bobbin disc around to put the next bobbin in transfer position the rings on the bobbin would contact the bobbin guide, as it should; but the force of the contact would move the butt of the bobbin out of the slot provided for it in the bobbin disc and cause the bobbin in position for the next transfer to be moved out of place in relation to the transferer and the bobbin support; this would cause the transfer mechanism to lose control of the bobbin, and this was causing the trapped and broken bobbins. I do not recall seeing this trouble but very few times in my entire experience with looms, but it illustrates what I mean when I say that no one instructor can teach the trainee everything there is to learn about loom fixing.

Another thing which causes loom fixers trouble, oldsters and trainees alike, is uneven or wavy cloth, caused by faulty operation of the mechanical let-off motion. I have covered this in a previous article, but that dealt only with the building and setting up of the let-off motion, and of course dealt with the use of all new parts.

Uneven cloth can be caused by improper operation of the take-up motion, but as a rule this can readily be detected and overcome, but when the let-off motion fails to deliver the yarn uniformly it is sometimes very difficult to locate and overcome the trouble. The first thing to determine is whether or not the point of the pallet and the teeth in the ratchet wheel are in good condition, because if the pallet is slipping over the teeth in the ratchet wheel it will cause uneven delivery of the yarn and result in uneven cloth. Our mill makes a number of various types of fabrics—and we have considerable trouble with uneven cloth—and I have found that the one thing that causes most of it is excessive wear on the protruding lugs attached to the internal gear pinion. These two lugs are inserted in the slots in the pinion cross head, and when they become worn they will press the pinion cross head against the ratchet wheel at one certain point on the revolution of the wheel, and this in turn puts excessive pressure against the pallet lever and retards the free action of the lever at this point, and when the wheel passes this point of pressure the pallet

lever will make a few strokes longer than usual and that is when the thin place is made, because more yarn is delivered at this point. Of course anything which prevents the free and uniform action of the pallet lever will result in uneven cloth, but the above mentioned trouble is the cause of a great majority of the trouble.

In several of the preceding articles I have dealt with the selecting and training of the loom fixing personnel. I have covered this subject in detail in so far as I am capable of doing, and I sincerely hope that some have been benefitted by reading them. I have received several letters asking me to narrate in detail, in condensed form, a procedure to follow in setting up and following through a loom fixers' training school, or program. I plan now to do that in the next article, and that will conclude what I have to say on training loom fixers. But there are other related subjects

which I will have something to say about, such as the proper training of the weavers, and the fixing of certain responsibilities where they belong. A good loom fixer will naturally do better work, and be a much better loom fixer when he has well-trained weavers and other properly trained personnel to work with. I do not think the loom fixers' training program should ever be stopped completely, because there are so many things the fixer should know, and keep brought up to date on. I think it is wise policy for the supervisor to meet with the fixers about once each month and ask them just how they proceed when they are called upon to stop a loom from making mispicks, thin places, bobbin breakouts and many other troubles. If this is done it will be surprising how many of the fixers cannot tell just what proper procedures are required to get the job done efficiently, and by having open and free discussions on these subjects all concerned will be greatly benefitted. If these meetings are conducted properly it will bring about a better feeling, and friendly co-operation by all concerned.

### Charlotte Textile Club Is Organized

Charlotte, N. C., hub of the large Piedmont area textile wheel, now has a textile club. Tom W. Church, Jr., executive vice-president of Highland Park Mfg. Co., Charlotte, was elected president of the Charlotte Textile Club at an organizational luncheon recently. Alex R. Davis, president of Longleaf Mills, Inc., Matthews, N. C., was named vice-

president and Buck Gunter, correspondent for *Daily News Record*, was elected secretary-treasurer.

The club was organized for the purpose of promoting and continuing a spirit of fellowship among representatives of the textile manufacturing, yarn, wool top, machinery, equipment, supply and service trades in Mecklenburg County. According to tentative plans, limits of the club's membership may be extended to include a wider area.



Some of the trade representatives who gathered for an organizational meeting of the Charlotte Textile Club are shown above. They are, left to right, first row: Walter B. Pratt, Sykes, Inc.; F. S. Love, American Cotton Manufacturers Institute; W. B. Croxton, Frank Ix & Sons, Sheraton Mills Corp., Cornelius, N. C.; James E. Taylor, James E. Taylor & Co.; Frank P. Barrie, Universal Winding Co.; Charles H. Conner, Jr., Anheuser-Busch, Inc., Corn Products Department; James T. McAden, Jr., TEXTILE BULLETIN; James Y. Rogers, Jr., John L. Stickley & Co., and W. D. Clark, Celanese Corp. of America.

Second row, left to right: W. W. Greene, Marion (N. C.) Mfg. Co. (partially hidden from camera); K. C. Loughlin, Celanese Corp. of America; Alex F. Schenck, Industrial Equipment Co.; H. Gordon Kenna, Jr., Swift Spinning Mills, Inc.; Robert H. Starnes, Crompton & Knowles Loom Works; L. M. Hair, Whitin Machine Works; A. C. Martin, Jr., Celanese Corp. of America; W. J. Yates, Johnston Mills Co.; A. Benson Davis, A. Benson Davis Co.; Harry C. King, Springs Mills, Inc.; Lewis Burgess, Crompton & Knowles Loom Works; Henry K. Kelly, American Viscose Corp.; W. A. Thomason, Jr., Saco-Lowell Shops; Karl Inderfurth, Karl H. Inderfurth Co.; Clifton E. Watson, Watson & Desmond.

Third row, left to right: H. H. Bucklin, Jr., Universal Winding Co.; C. H. White, Marquette Metal Products Co.; Pen Wilson, Pen Wilson Co.; Lanier Branson, Jr., Branson Co.; E. Waring Best, Celanese Corp. of America; C. A. Harris, Jr., Iselin-Jefferson Co.; Henry Stokes, Cosby & Thomas; Lee Pickens, John L. Stickley & Co.; Dudley M. Dunlop, Universal Winding Co.; R. L. McCauley, Product Sales, Inc.; E. T. Cansler, Jr., Saco-Lowell Shops; and C. W. (Buck) Gunter, *Daily News Record*.



# Bleaching, Dyeing & Finishing

## Will New Fibers Result From Current Developments In Cotton Chemistry?

MORE than 100 of the nation's leading textile scientists gathered recently at Washington, D. C., for a two-day conference on chemical finishing of cotton. Sydney M. Cone, Jr., secretary-treasurer of Cone Finishing Co. and president of the National Association of Finishers of Textile Fabrics, presided over the meeting, which was sponsored by the National Cotton Council. Mr. Cone prefaced the meeting with the following statement: "The scouts and explorers in the forefront of progress are not usually recognized during their lifetime. They spend days and nights amid hardships under conditions not generally known and hardly understood by the masses of people whom their works will serve. Their cabins in the wilds are temporary affairs because they must be on the move, even further after the unknown and undiscovered. It is, then, unusual and a matter of special note to gather a group of explorers. We pay them tribute, and ask them to tell us of their adventures."

Almost all program participants stressed that the chemical finishing industry is on the brink of revolutionary developments. Through the chemical finishing process, it was brought out, entirely new fibers can be obtained from cotton fibers. They can be tailored to order much the same way as an industrial product is developed to meet a specific use.

The armed forces, for example, asked for flame-proof fabrics. Through chemical finishing this has been achieved not just in the laboratory but in commercial production as well.

Many of the more promising finishing processes now under study were outlined at the sessions. Practical problems of translating these laboratory findings into successful commercial production were discussed. Need for developing better and more detailed information about markets for these new cotton finishes was emphasized.

Market studies, the group agreed, reveal specific qualities not now present in cotton but which are desired by consumers. They provide an index as to how much extra the customer will pay for fabrics with these qualities.

Represented at the conference were private chemical companies, textile mills, finishing plants, textile machinery manufacturers, and government and private research laboratories. Those in attendance described the meeting as one of the best technical conferences ever held for the textile industry, result of which should stimulate even wider interest in the relatively new science which holds great promise for cotton.

The conference was the first meeting at which the chemical industry, finishers and the textile industry—sharing an

equal interest in expansion of the technique—have been brought together.

A forum on problems of commercialization, market studies and consumer demands concluded the conference. A resume of this discussion follows:

*Processing Problems*—Since many of the new finishes described must be applied in non-aqueous media, there was considerable discussion of the problem which the mills must meet in adapting them to their plants. There are three objections usually made to processes which require solvents or other non-aqueous media: (1) expense; (2) local laws (discharge of effluents, fire hazards, etc.); (3) unwillingness of textile labor and management to work with toxic or otherwise hazardous materials. However, such processes have been and are being used by mills on a commercial scale; for example, in the solvent scouring of wool, fabric coating, hot oil dyeing, molten metal dyeing, and pigment printing from solvent emulsions.

The chemical companies successfully carry out many processes in a solvent or other non-aqueous medium, often using hazardous materials. The chief problem is recovery of the solvent or other substances not used up in the process. However, most personnel in the textile industry are not familiar with close control of chemical processes, so that some training will be necessary before certain of the new finishing developments can be utilized by the cotton textile industry. Objections were raised that, since water is the ideal swelling agent for cotton, it should be used wherever possible, and that solvent or other non-aqueous processes would limit the mills' versatility. It was concluded that adaptation of chemical finishes to present plants presents no insuperable difficulties, and that it will be done whenever a new process is proved of value.

*Machinery for Chemical Finishing*—Several conferees emphasized that it was unnecessary to worry about development of new machinery until a given process was proved worthwhile. One representative of a textile concern stated that he has never found it necessary to design new machinery to test a finishing process. Laboratory developments can be taken directly to the plant, equipment improvised, and their worth determined. Only after the process is found to be acceptable need any new machinery be considered. The machinery manufacturers present assured the conferees that equipment could be designed for any of the processes described, and would be as soon as the finishing industry said it was ready for them.

*Market Research*—The Cotton Council's market research director discussed the function of his department, and how

## BLEACHING, DYEING & FINISHING

the potential for various finishes in specific markets and fabrics is determined. All those interested are invited to consult the council concerning their individual needs. A request was made for information on the dollar value to the finisher or the consumer of such properties as launderability, crease-resistance, etc. For example, is crease-resistance worth ten cents per pound? It was suggested that these data might be obtained from a study of the price paid for the fibers which now have those properties. Another conferee suggested that it would be helpful to know the quantities of chemicals which go into various finishes at present; e.g., how much urea-formaldehyde resin is used for creaseproofing? Currently published figures are too general. Most of those present felt that this information, while undoubtedly of value to the chemical industry, would be of little interest to the finisher.

**Cost of Chemical Finishes**—Several finishers felt that the developments discussed will be too costly for commercial use. In many cases the cost of chemicals alone is extreme, and the cost of labor, new machinery, etc., can only be conjectured. On the other hand, there never appears to be a lack of finishers willing to try a promising new development, and costs come down when quantity production is established.

Since the various papers presented at the conference served as an up-to-date accounting of studies and development of new chemical treatments for cotton, they are herewith abstracted in considerable detail.

## THE CONCEPT OF CHEMICAL FINISHING

by C. H. Fisher, Southern Regional Research Laboratory

The term, "chemical finishing," is used to refer to chemical treatment of cotton that alters the composition and structure of the cellulose molecule without destroying the fibrous form. The resulting fibers—not cotton but new compositions of matter—have chemical and physical properties different from those of the original cotton. In other words, new fibers and new textile materials are produced.

Entirely new textile products are obtained. The opportunities for making these new and different fibers are almost unlimited. The effect of chemical finishing is usually permanent. Many versatile and inexpensive reagents are available for chemical finishing, and additional ones are being produced constantly by a growing chemical industry. A low degree of substitution often suffices to bring about profound changes in the chemical and physical properties of the modified cottons. Thanks to the cellulose chemist, much information of benefit to research on chemical finishing is available.

While the changes effected by chemical finishing are usually more nearly permanent than those caused by additive finishing, there are exceptions. For example, cellulose formate and xanthate are un-

stable, whereas some dyes and crosslinked resins applied by additive finishing are relatively permanent. The virtually unlimited opportunities afforded by chemical finishing may be considered as falling into two broad classes, i.e., those in which the structure of the anhydroglucose units is altered without appreciable change in the gross or polymer structure of the cellulose chains, and those in which the chemical changes have a significant effect on the polymer structure. Examples of the latter type are the attachment of large plasticizing groups to the cellulose chains and the formation of crosslinks.

Of the various possible methods listed above for modifying cotton, esterification and etherification have received most attention presumably because they appear to offer the most and the best opportunities. Numerous attractive reagents are available for conducting these transformations. Crosslinkage of the cellulose chains offers another method for effecting major changes in the polymer structure. Much additional thorough and fundamental research is needed to develop improved crosslinking reagents and methods and to determine the effects of the following variables: molecular weight, lattice-type and crystallinity of the cellulose; number, distribution, length and chemical nature of the crosslinks; and the effect of side groups.

## THE CHEMISTRY OF CREASE-RESISTANT FINISHES

by R. F. Nickerson, Monsanto Chemical Co.

Crease or wrinkle resistance imparted to fabrics by high polymers like starch deposited on external fiber surfaces is primarily a physical effect. The fabric is harder to wrinkle simply because it is stiffer. Wrinkle resistance produced without appreciable fabric stiffening by water soluble reactants of low molecular weight that enter into fibers is basically a chemical effect. The fabric properties that result stem from real chemical changes. Such chemical finishes are particularly suited to cellulose materials such as viscose rayon and cotton which wrinkle easily in normal use.

The chemistry of these finishes involves the physical behavior of cellulose as well as the chemical properties of cellulose and of the reactant. Cellulose materials wrinkle easily because cellulose molecules are relatively rigid and inexhaustable and hence stresses cause displacements of molecule segments in the fibers. After being displaced molecules are held in their new positions by forces of attraction between hydroxyl groups. The wrinkle therefore remains. This behavior is desirable during ironing and during setting of yarn twist but undesirable when a fabric is performing its ultimate function.

Cellulose fibers swell laterally in water, shrink laterally on being dried. Increasing amounts of moisture in fibers promote increased wrinkling by pushing molecules apart, thus lowering molecular interactions, and facilitating displacements. Dry fibers represent minimum swelling, maximum molecular interaction, and maximum wrinkle resistance. Wet fibers represent maximum swelling and have least wrinkle resistance. In short, water is a plasticizer for cellulose.

Wrinkle resistance is achieved with chemical finishes which inhibit fiber swelling. Dry cellulose is placed in an aqueous solution of reactant and latent catalyst. Fibers swell and reactant and catalyst are carried into the fibers and deposited. The fabric is then dried and heat-treated to complete the process. Reactants are generally polyfunctional compounds of methylol type related to hemiacetals. Some can polymerize to form resins, others do not. All, however, are capable of reacting with hydroxyl groups. Chemical and physical evidence indicates reactants produce wrinkle resistance by forming hydroxyl-hydroxyl bonds which reduce fiber swelling and plasticity.



Representatives from the Southern Regional Research Laboratory who appeared on the chemical finishing conference program were (left to right): C. H. Fisher, E. M. Buras, Jr., John Guthrie, Carl Conrad, Richard Reeves and J. David Reid.



## CURRENT STATUS OF THE PARTIAL ACETYLATION DEVELOPMENT

By E. M. Buras, Jr., S.R.R.L.

Fibrous partially acetylated cotton was first prepared about 1900, but practical applications of the outstanding properties of this material have been developed only recently, following the development of a practical process for its preparation. The Southern Regional Research Laboratory has worked out both batchwise and continuous processes; rolls of fabric can be handled on standard dye jigs as used in cotton finishing plants, or on a newly-developed continuous range; yarns may be treated in package form, on tubes, or continuously as a warp beam; and raw stock may be handled in a raw stock dyeing machine. Well adapted for commercial use, the process employs glacial acetic acid and acetic anhydride, with small amounts of perchloric acid as a catalyst, to partially convert the cellulose in cotton to the ester, cellulose acetate. Data on the concentration of chemicals used, duration of treatments, temperature, and other conditions required for best results have been determined. Several commercial developments are based on these processes, with production up to about 3,000 yards of 54-inch width per shift per machine anticipated for initial runs. Problems of process control, materials handling, by-product recovery, and safety have been adequately solved for commercial applications.

The cost of processing is shown to be moderate, and is more than offset by the greatly improved service life of partially acetylated cotton products, which may be considered as virtually new materials. The potential fields already proven by service tests include many applications in which rot or mildew resistance and heat resistance are important factors: laundry press cloths and pads, where acetylated sheetings give four to five times the life of heavy cotton canvas; water softening filter cloth, where acetylated bags remain intact for a year's service while ordinary cotton lasts a month or two; seawater immersed twines, where acetylated twines last two or three times as long as the best tarred controls, and eight times as long as those untreated; and sand bags which remain intact for two years.

## AMINIZATION OF COTTON AND OTHER ETHERIFICATION REACTIONS

by John Guthrie, S.R.R.L.

Aminoethoxy groups may be attached to the cellulose of cotton fiber by reacting it with 2-aminoethylsulfuric acid in the presence of sodium hydroxide. A study of the variables involved in this aminization process has shown that good results may be obtained by padding fabric with a solution composed of 20 per cent 2-aminoethylsulfuric acid, 30 per cent sodium hydroxide, and 50 per cent water to a pick-up of 140 per cent, curing on steam cans at a surface temperature of about 120° C. so that the fabric is heated for about 15 minutes, washing, and drying. Cotton fabric aminized in this way contains 0.7 to 1.0 per cent nitrogen, depending on the weave and construction. Lower degrees of aminization may be obtained by using a smaller percentage of 2-aminoethylsulfuric acid.

Cotton in the form of fabric or sliver has been aminized by this process on a pilot plant scale, but raw stock and yarn have so far been aminized on a laboratory scale only. The process appears to be best suited to the aminization of cotton fabric. The aminization of cotton with various sulfato-amino compounds related to 2-aminoethylsulfuric acid has been explored. Although a number have been found that introduce amino groups, none of them appear to offer any advantage over 2-aminoethylsulfuric acid.

The most striking characteristic of aminized cotton is its ability to take up acid wool dyes. However, these dyes are not very fast to washing on aminized cotton and so far no practical use of this dyeing property has been found. Aminized cotton takes on most dyes more readily than ordinary cotton. Direct cotton dyes are taken up more readily than ordinary cotton. Direct cotton dyes are taken up very rapidly and extremely dark shades may be obtained. No salt is required and the dye bath should be slightly alkaline at the start to retard the rate of dyeing. Direct cotton dyes are somewhat more fast to washing on aminized cotton than on ordinary cotton and some improvement in light fastness has been noted with certain dyes. Particularly good results may be obtained with Coprantine dyes. When aminized cotton fabric is dyed very dark shades with certain dyes containing sulfonic acid groups, considerable flame

resistance is obtained, but not enough to pass the severe tests required for a truly flameproof fabric.

The amino groups of aminized cotton will complex with copper and take up about one per cent of this metal. Aminized cotton may also be reacted with 8-hydroxyquinoline-5-sulfonic acid to give a fabric which will chelate with many materials, including zinc and copper. Fabrics treated with the latter metal show considerable rot resistance. The amine groups will also react with certain nitro-chlorobenzenes in alkaline solution. The nitro groups may then be reduced, diazotized and coupled with phenolic compounds to give colored fabrics that are fast to laundering. A durable water repellency can be also imparted to aminized cotton by reacting it with cetyl bromide.

The successful aminization of cotton with 2-aminoethylsulfuric acid has led to the investigation of other sulfate compounds for the attachment of various groups to cotton by ether linkage. It has been shown that certain dyes containing the sulfate group may be reacted with cotton in this way to produce colored fabrics that are extremely fast to washing. Similarly, allylsulfuric acid has been reacted with cotton to introduce allyloxy groups and make a partially substituted unsaturated ether of cotton. Departing from the sulfato reaction to the more conventional etherification with chloro-compounds, sulfoethyl cotton has been made by the action of 2-chloroethylsulfonic acid on cotton and phosphatoethyl cotton has been made by the action of 2-chloroethylphosphoric acid. These chemically modified cottons are of interest as cation-exchange materials.

## DECRYSTALLIZATION—CHEMICAL MODIFICATION OF PHYSICAL PROPERTIES

by Carl M. Conrad, S.R.R.L.

The effect of ethylamine on cotton is not a chemical process in the sense that a permanent cellulose-amine complex is produced. Nearly the entire amine can be recovered from the treated cotton by suitable means. The treatment consists in immersing the fiber in liquid ethylamine at a temperature near the freezing point of water, and allowing it to stand for a short time. The change is quite rapid but for the sake of pushing the changes as far as possible it has been customary in our studies to allow the cotton to stand submerged for four hours. The liquid ethylamine is now drained off and the excess squeezed out as much as possible. That which remains behind is extracted in a Soxhlet apparatus, using chloroform or hexamine as nonpolar extractive media. A small amount of phosphoric acid is placed in the distilling flask to prevent recycling of the amine. When the extraction is completed the fiber is removed from the apparatus and allowed to dry in the air. It retains a trace of amine and, in appearance, generally resembles the initial starting of the material.

The nature of the reaction between ethylamine and cellulose is not yet fully understood. There is evidence, however, that a temporary compound is formed, somewhat similar to the water hydrates of the inorganic salts. Compounds of cellulose with sodium hydroxide and with ammonia, showing well-characterized X-ray patterns, have been reported in the literature. It is concluded that the unstable compound first formed is subsequently decomposed by the nonpolar liquid, and that although recrystallization to the Cellulose I state takes place partially, this is far less complete than in



Among those who presented papers were (left to right): Dr. R. F. Nickerson of Monsanto Chemical Co., Boston, Mass.; Dr. Lyman Fourn of Harris Research Laboratories, Washington; and Dr. George Seidel of E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.



the starting material. If water is used to remove the amine then decomposition of the complex also occurs but with complete re-ordering of the crystalline lattice to their original condition. In other words, the resulting crystallinity is as great as before treatment.

Although the ethylamine of commerce, which contains about 67 per cent water, is unable to decrystallize cellulose it has not been found necessary to dry the cotton before applying the treatment. Cotton containing five to six per cent moisture appears to undergo the maximum change that can be achieved. Limited experiments seem to indicate that an acceptable moisture content might extend down to four per cent and up to at least nine per cent.

The rapidity of the transformation is relatively high. Measurements indicate a reduction from the original crystallinity of 85-90 per cent to about 45 per cent in the first 15 minutes. During the succeeding four hours only about 20 per cent additional reduction is realized. It has been found that contact of the cotton with the air during the ethylamine treatment can result in considerable oxidative degradation. Experiments carried out for four hours or overnight indicated 15 to 20 per cent reduction in average cellulose chain length. In commercial applications confined to short intervals of treatment it is probable that damage from this source would be negligible.

It is believed that ordinary iron and steel would be entirely satisfactory for reaction vessels and piping. On the other hand, brass or aluminum would not resist attack. Because ethylamine boils at 17° C. the equipment should be constructed to withstand low pressures of two or three pounds per square inch. Refrigeration would be desirable not only to reduce this pressure but also to promote the transformation.

Ethylamine vapor is considered to be toxic to the eyes and lungs if breathed in concentrations of 50 ppm or more. Because of its strong and disagreeable odor a workman would always be aware of the presence of appreciable concentrations of ethylamine escaping from leaks, etc. Hexane, the more suitable of the possible extractive media which have been tried, is also toxic; its maximum allowable concentration in commercial applications for prolonged periods of exposure is reported to be 1,000 ppm.

While the effect of fabric construction on the degree of transformation has not yet been adequately explored, the treatment can be satisfactorily applied to yarns in either the unstretched or stretched state. Stretching reduces the extent of transformation somewhat, but it can be seen that the values obtained are considerably below those which can be retained after a water boil.

With the exception of the small amount of phosphoric acid (85 per cent) required during extraction to fix the residual ethylamine and prevent its recycling, no chemicals are actually consumed in the process. Cotton in the form of yarn requires roughly three quarts of liquid ethylamine per pound to transform it. In the lint state, because of the large bulk, a greater ratio of liquid to cotton would be required. At the completion of the immersion only a third to half of this can be separated by pressing and decantation. The remainder must be removed by extraction with a non-polar

liquid, such as chloroform or hexane. In a new process now under investigation, the residual ethylamine would be removed by evaporation. In the latter case, however, there is considerable evidence that the product is of a different cellulose nature.

The product formed by action of anhydrous ethylamine on cotton, followed by solvent extraction, has a much reduced crystallinity. The ethylamine treatment increases the cross-sectional area of the fibers to between ten and 20 per cent. The yarn strength is usually increased, and in favorable cases may be increased to nearly 50 per cent. The moisture absorbing capacity of treated yarns is very materially increased. This is indicative of an increased activity that is shown by accessibility measurements and chemical reactivity. However, recent studies have shown that this increased activity is very sensitive to the after-treatment and can be retained or easily lost. The treated cotton dyes much more deeply, and will absorb a greater amount of resins, such as melamine formaldehyde, than the untreated cotton and absorb it more quickly.

The ethylamine-treated cotton as described above is visualized as an intermediate product capable of various practical applications. In the form of yarn or fiber the product is ready for cross linking treatments to improve the elastic recovery ability and other physical properties. Special modifications are visualized as the starting material for rapid chemical reactions in long chain esterification and etherification reactions. This might be extended to innumerable directions to provide a base for impregnations to achieve water repellency, fire resistance, creaseproofing and the like. The product may have value as an absorbent for water and other liquids and vapors.

## TREATMENT BY DRY ETHYLAMINE

by Lyman Fourt, Harris Research Laboratories

Since treatment of cotton with anhydrous ethylamine has under some conditions a strong decrystallizing action, as well as a strong swelling effect, this process has been examined in comparison with mercerization, which also swells cotton, and reduces its crystallinity, at least as measured by some techniques. Slack skeins were shortened to 89 per cent of kiered length, or 86 per cent of original length by anhydrous ethylamine. At the same time, the contrast ratio was reduced, as with mercerization without tension.

Two new series of trials with ethylamine have been carried out, one with skeins treated slack, the other designed to resemble mercerization at constant length. This was accomplished by winding the yarn onto stainless steel plates, carrying out both ethylamine treatment and subsequent mercerization on the plate. The directional reflectances could be measured on a given plate before treatment and at successive stages. On skeins treated slack the ethylamine shortened the skeins to 91 per cent of their kiered length, or 88 per cent of the original. Subsequent mercerizing under tension considerably increases the luster.

Moisture regains were determined on the washed skeins, before rewinding for final optical measurement. Barium number was determined after this measurement. Both agree in showing more accessibility after ethylamine treatment, or after this plus mercerizing. However, neither measure of accessibility is in agreement with the rank of luster, as shown by contrast ratio, for the comparison of mercerization alone versus ethylamine treatment alone. Ethylamine appears to increase the accessibility, or decrease the crystallinity, of the cellulose more; mercerization with 23 per cent NaOH increases the luster more.

In comparing treatment with ethylamine on slack yarn or yarn under tension, the ethylamine treatment is seen to act on luster in the same general way as mercerization, but to a lesser extent. Slack treatment by ethylamine, however, seems to prepare the cotton to respond better to subsequent mercerization, though the level reached is not higher than that reached by other means.

## INORGANIC MODIFICATIONS OF CELLULOSE WITH TITANIUM

by George Seidel, Du Pont Co.

Although titanium is abundant and relatively cheap and certain fundamentals of titanium chemistry have been known for years, this branch of chemistry is unfamiliar to the average chemist and relatively unexplored by the few chemists specializing in this field. It has been recognized for many years that organic compounds containing hydroxyl groups will react with titanium compounds.



Machinery firm representatives at the Washington conference, left to right: John R. Schenck of Proctor & Schwartz, Inc., Philadelphia, Pa.; DeHaven Butterworth, Sr., of H. W. Butterworth & Sons Co., Bethayres, Pa.; and Harry F. Creggan of Rodney Hunt Machine Co., Orange, Mass.

Titanium shows no evidence of combining chemically with fabrics that have no free hydroxyl groups. This raises the question of acid degradation of cellulose. Of course, this is a time-temperature relationship and, at elevated temperatures, tendering will occur in a matter of seconds. At room temperature, however, no tendering occurs in 15 minutes, and with heavier fabrics protected against evaporation (which otherwise would result in local overconcentration) no tendering is noted after an hour.

Theoretically, a chemical reaction between titanium and cellulose should proceed almost instantaneously, and perhaps does. In practice, however, some time must be allowed for penetration, and the heavier the fabric and tighter the weave, the more time is required. With plush, where the pile is loose and each thread is separated from its neighbor, little or no time lag is required. Heavy, densely woven flat goods may require 15 minutes. That penetration and not reaction rate is the governing factor is indicated by the fact that certain wetting agents are very effective and thorough scouring of a fabric reduces the necessary time lag.

Once it had been decided that titanium reacts with cellulose or at least is held by strong secondary bonds, the next step was to find a practical application. It had been early noted that titanated cotton burned less readily than untreated fabric, but the degree of flame retardancy was far from practical. Other workers have noted that tin oxide will inhibit flaming, and the use of antimony oxide with chlorinated paraffin is well known. To this list of inorganic compounds may be added tungsten, aluminum, zinc, iron, etc.

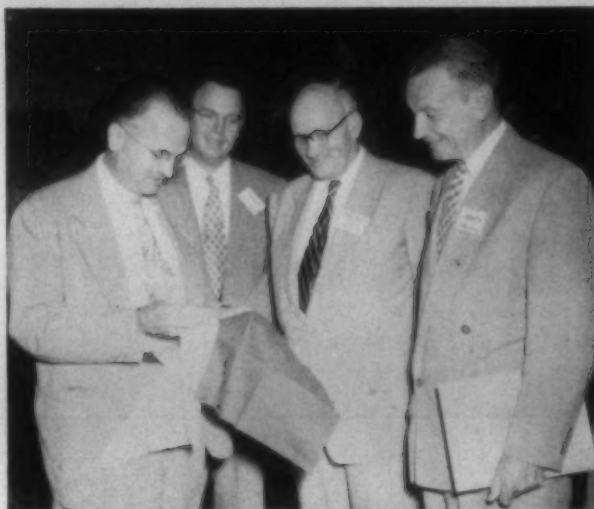
The combination of titanium with other metal salts was the next step. Some combinations showed a degree of flame-retardancy surpassing that of titanium alone. Of the many tried, however, antimony trichloride with titanyl chloride proved to be the most effective—an altogether unexpected but promising result—and this combination has been developed and is sold under the trademark "ERIFON" flame retardant. Antimony oxide alone is ineffective; it is at the bottom of Ramsbottom's list. Yet the impregnation of cotton or rayon with titanyl chloride plus antimony trichloride followed by neutralization with an alkali—such as 15 per cent sodium carbonate—results in a durably flame-retarded fabric. Such treated fabrics are still flame retardant after 100 household launderings.

Because this flame retardant contains several per cent of excess hydrochloric acid, the padder pan should be rubber lined; the padder rolls should also be rubber covered and all bearings protected against splashing. The J-box can be of wood or rubber-covered steel; if other means of lagging the fabric are used, such as skying rolls, these, too, should be rubber-covered. All operations are carried out at room temperature. The padder should give the best impregnation and expression possible. This usually means hydraulic pressure, for it is important to drive the solution into the center of tightly twisted yarns and closely woven fabrics. For reasons of economy, it is also important to obtain as low a wet pick-up as possible.

The J-box probably allows for diffusion of the titanyl chloride-antimony chloride complex into the fabric. In the case of plush, where the pile is raised and every thread is more or less free of its neighbor, very little lag is necessary; a minute is enough. With heavier, tightly-woven fabrics, 15 minutes are required to reach equilibrium. The authors have found no cases requiring more than 15 minutes, although longer times, within reason, cause no deleterious effects. Nevertheless, 15 minutes should be an absolute maximum lag time, for the sake of safe operating practice.

Thorough, uniform, and instantaneous neutralization is of extreme importance. For this reason a small neutralizing tank in front of the main range allows for constant flow of 15 per cent soda ash and frequent turnover of the tank's contents. There must be no folds in the fabrics, as these will be apparent in the finished fabric. A spray should be considered optional and used only where its value has been demonstrated for a particular fabric. If neutralization is not rapid and complete, the partially neutralized flame retardant will leach in the solution resulting from incomplete neutralization. Some hydrous oxides are formed, and as much as possible of these should be carried away at this first step, so as not to result in chalkiness of the finished fabric. The subsequent boxes in the neutralizing range complete the neutralization, the number of boxes depending upon the particular fabric being processed.

The next step, washing, is also important, although it poses no particular problem with fabrics that can be rope washed. In these cases, the treated cloth is fed into a slack rope washer with a nip and washed until all excess precipitate is removed. Soap, a synthetic



Inspecting a chemically treated cotton fabric (left to right), John Guthrie of the Southern Regional Research Laboratory, R. H. Baker, Jr., of Mooresville (N. C.) Mills, R. H. Souther of Cone Mills Corp., Greensboro, N. C., and Walter M. Scott of the United States Department of Agriculture.

detergent, or a mixture of these can be used; a little soda ash is sometimes added with the soap. Fabrics that cannot be rope washed are difficult to handle. A certain amount of precipitate remains on the fabric and this persists in the finished fabric, appearing as chalk and adversely affecting the appearance. In extreme cases, the hand is also harshened. There are several possible solutions to this problem and work is now under way to find a practical answer. After scouring, the fabric is handled in the normal fashion.

It is desirable to apply vat dyes before Erifon flame retardant. Direct dyes are, in general, applied after the flame-retardant treatment, although with certain direct dyes on certain fabrics, dyeing beforehand may be preferable. Some dyes are seriously affected by Erifon, others only slightly. Dyeing is a separate problem with each new application, but to date this has not been found a stumbling block. From a practical point of view, several plant runs have been made involving hundreds of thousands of yards of cloth and the treated fabrics have met or surpassed requirements based on laboratory trials. In spite of these promising results, there are many improvements that can be made and our research is directed towards these ends.

We have been constantly challenged by the problem of increasing the efficiency of application of Erifon. Concentrating dilute solutions on the fabric is one approach to the problem. We call this "hot lag" since the evaporation is accomplished by passing the impregnated fabric over heated cans. This immediately introduces the hazard of tendering so that two-thirds strength Erifon (by volume) was modified with two mols of urea per liter of solution. The acidity is thus reduced and the following charts show that tear and tensile strength can be maintained if time and temperature are also balanced.

In spite of important "pluses," laundry durability is the main advantage that durable flame retardants have to offer over non-durable treatments. It is therefore important, in any particular system, to select the composition that has the best and most economical laundry resistance.

It has also been demonstrated that cotton yarn can be successfully treated with Erifon. Special problems arise in the feeding, handling and winding of yarn, but those familiar with this specialized industry have been able to treat yarn and obtain a product that was flame-retardant and also handled and dyed well. As in the case of brushed viscose and plush fabrics, yarns must be thoroughly scoured to remove loose chalk. Where chemical reaction with the cellulose molecule is possible and ordinary fiber properties unaffected, it is possible to handle yarn with almost as much ease as it is untreated yarn. Although the handling of yarn differs from that of fabrics, the basic chemical steps are the same.

In conclusion, the subject treatment for flame retarding cotton and viscose has been demonstrated as practical in a number of textile finishing plants and on a fairly large variety of fabrics. This does not mean that all problems are solved; as a matter of fact, all the problems facing us have not been discussed and many others



may exist which have not yet come to our attention. Besides being a durable flame retardant, the subject treatment has a number of "plus" properties which may prove of value in certain practical applications.

## STUDIES OF THE CELLULOSE-TITANIUM COMPLEXES

by Richard E. Reeves, S.R.R.L.

One of the first methods for flameproofing cotton studied at the Southern Regional Laboratory involved the use of coatings of chlorinated paraffins and antimony oxide. At one time we were faced with the problem of what other substances might be substituted for antimony oxide if the latter were not available in sufficient quantity. This created interest in other oxides which might be of value in reducing the flammability of cotton. Although no formal project was initiated at that time our interest was such that it was greatly stimulated by the announcement of the Erifon process. We supposed that those companies which developed the process involving deposition of titanium and antimony into cotton from strong aqueous acid solutions must have studied other combinations of metals deposited in this fashion.

The alkyl orthotitanates,  $Ti(OR)_4$ , seemed to offer a way of causing cotton to react with titanium under very mild conditions, i.e., without introducing mineral acids such as are employed in the Erifon process.

Air-dried cotton immersed in an organic solvent containing an orthotitanate will not react sufficiently to impart much flame resistance. However, if the cotton is activated by soaking in water or alkali, then solvent exchanged with some anhydrous solvent such as isopropyl alcohol, it will react to take up ten to 13 per cent  $TiO_2$ . Good flameproofing requires about 11 per cent  $TiO_2$ , excellent rot-proofing is achieved by about nine per cent  $TiO_2$ . Introduction seems to be satisfactory in fiber, yarn or fabric; the fabric being denser is more efficiently treated than yarns or fibers. To get flameproofing it is necessary to use quite a high concentration of orthotitanate, hence, excess reagent remaining on the fabric represents quite a loss.

At this moment the process appears to have a number of economic disadvantages. First, the cotton must be wetted, then water removed by a solvent exchange process; this is bound to be an expensive procedure. Secondly, reaction must be carried out in an organic solvent under essentially anhydrous conditions. Thirdly, orthotitanates are at present very expensive reagents though we

understand there is prospect of very material reduction in cost. Fourth, unless some recovery steps are instituted, a considerable amount of reagent will be wasted in the form of adhering unreacted liquid.

The only simple step in the process is the fixing of the titanium in the fiber. This is accomplished by a water wash. The excess reagent is decomposed by water to a hydrated titanium oxide, the reacted titanium also combines with water, but it remains very finely distributed throughout the fiber. Electron micrographs of the ash obtained upon burning titanium-impregnated fibers indicates that penetration of the fiber is very complete.

The properties of cotton fibers which are known to be markedly altered by titanium are rot resistance and flame resistance. Strength does not seem to be significantly altered. It is very probable that future work will reveal significant changes in other properties such as dye retention and elasticity.

The titanium in cotton will withstand almost any kind of alkaline treatment and will withstand the leaching action of weak aqueous acids. It is very extensively dispensed throughout the cotton fiber, and there is good reason to believe it is chemically bound to the cotton fiber. Of the four properties investigated—strength, rot-proofing, flameproofing, glowproofing—three have been drastically altered. In two cases the change in properties is in the direction we now call "desirable;" in one case, undesirable. Future work will be aimed at ascertaining what other desirable property changes may be brought about by loading the fiber with titanium dioxide as well as in finding means of overcoming undesirable property changes.

## FLAMEPROOFING OF COTTON WITH PHOSPHORUS COMPOUNDS

by John Guthrie, S.R.R.L.

Many phosphorus compounds when applied to cotton will reduce flammability. However, in developing a practical flameproofing treatment of the permanent type based on phosphorus compounds, certain difficulties are encountered. Even when the phosphorus is in actual chemical union with the cellulose in a chemically modified cotton such as phosphorylated cotton, a partial cellulose phosphate in the ammonium salt form, the flame resistance is lost during laundering due to cation-exchange involving the replacement of ammonium ions by sodium ions. Another phosphorus—containing derivative of cotton cellulose, phosphatoethyl cotton, also loses its flame resistance when laundered due to the same type of cation-exchange. To overcome this difficulty, phosphorus compounds of a type not subject to cation-exchange have been investigated. Although no practical method has been found for attaching such compounds to cotton cellulose by actual union, a very promising flame resistant application based on impregnation of cotton with a polymer containing phosphorus has been found. This polymer is based on tetrakis (hydroxymethyl) phosphonium chloride,  $(HOCH_2)_4P^+Cl^-$ , a crystalline compound made by reacting phosphine with formaldehyde and hydrochloric acid. It reacts like formaldehyde in polymerization reactions. When it is mixed with methylol melamine in aqueous solution, applied to cotton and cured, excellent flame resistance of the permanent type is obtained. Crease resistance is also imparted to the fabric, but the loss in tear strength associated with crease-proofing may be a disadvantage in some applications. Work is in progress to minimize this decrease in tear strength and it is hoped that it may be held at 20 per cent or less. The problems involved in making tetrakis(hydroxymethyl)phosphonium chloride on large scale will have to be solved before the method can be used commercially.

## CARBOXYMETHYLATION, CHEMICAL BONDING WITH RESINS, TREATMENT WITH OCTADECYL ISOCYANATE, ETC.

by J. David Reid, S.R.R.L.

The chemical modification of cotton cellulose gives what is essentially a new fiber, changing the chemical composition of the cellulose but retaining the fibrous character of the cotton. A number of methods of obtaining products with changed properties have been investigated. In some cases the treatment has been aimed at a product with definite end uses while in others a promising treatment has



Left to right: George Buck of the National Cotton Council, who arranged the conference on chemical finishing of cotton; Sydney Cone of Cone Finishing Co., Greensboro, N. C., who was general chairman; C. Norris Rabold of Erwin Mills, Inc., Cooleemee, N. C., and Richard E. Sumner of American Cyanamid Co., Bound Brook, N. J., session chairmen.



been used to modify the cotton followed by a search for uses for the modified material.

In some cases reactions are studied for the fundamental information obtained which may aid in the solution of other problems. However, in most cases chemicals are selected which are either inexpensive or potentially so, and which could be applied to the cotton under commercial conditions.

Three widely differing methods of chemical modification have been selected as illustrative examples. These include: (a) carboxymethylation, a deep-seated change in the cellulose molecule in which each carboxymethyl group is attached to a hydroxyl group and distributed fairly well throughout the fiber, (b) chemical bonding with a resin-forming chemical, beta propiolactone, which reacts with the cellulose but may further react with the group so attached to yield a resin-like material bonded to the cellulose by chemical attachment, and (c) topochemical or surface reaction with a very small amount of a chemical, octadecyl isocyanate, to give a water-repellent textile.

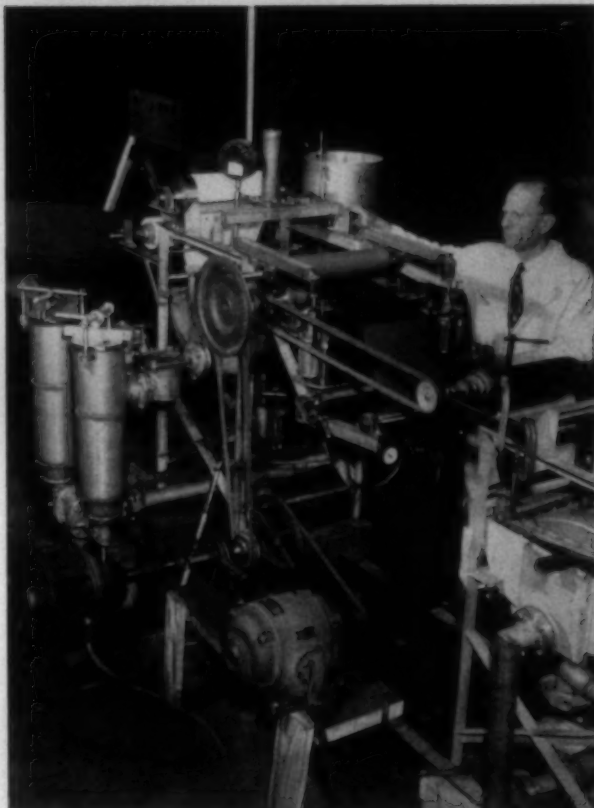
Carboxymethylation involves impregnation of the cloth with a small amount of monochloroacetic acid, followed by treatment with strong sodium hydroxide to introduce the carboxymethyl group into the cellulose. The product is permanently "starched" and highly absorbent. It has been found that the acidity of the carboxyl group is sufficient to catalyze efficiently the usual commercial creaseproofing resins and the high swellability of the modified cotton affords easy access of these resins to the interior of the fibers. The product gives superior creaseproofness without the stiffness which usually accompanies high resin content. As much as 20 per cent pick-up of resin may be introduced without undue stiffness whereas ordinary cloth with this amount of resin would be stiff and boardy.

A different type of chemical modification is obtained when cotton cellulose is reacted with beta-propiolactone, a chemical which is potentially very inexpensive. The lactone reacts with cotton in water-immiscible inert organic solvents, the amount of reaction being controlled by the temperature used. Either etherification or esterification may take place and the lactone then reacts further with the group so attached. Cotton with 20-25 per cent pick-up, for example, has reduced water-absorbency, a large increase in fiber bulk and diameter, and resistance to some types of acid degradation. The treatment causes little or no loss of breaking strength. Uses remain to be explored. Fibers for carpets and rugs, electrical insulation, soil-resistant textiles, and other uses are indicated.

The changes in textile properties imparted by topochemical reactions are exemplified by the use of octadecyl isocyanate on cotton. This molecule is too large to penetrate the fiber wall; therefore, reaction takes place essentially on the surface. It has been calculated that 0.2 per cent add-on of material is sufficient to cover the surface of a fiber, and this amount is sufficient in the present case to give a product having an excellent spray rating. Unfortunately, this amount is not sufficient to prevent the penetration of water under dynamic conditions and methods of causing greater amounts of reaction have not been found. However, methods of preparing emulsions of octadecyl isocyanate have been developed and these emulsions are stable for long periods of time without decomposition of the isocyanate. The latter is rather surprising in view of the known reactivity of isocyanates with water.

## New Continuous Dyeing Machine Unveiled

Pittsburgh Coke & Chemical Co. and Hussong-Walker-Davis Co. on Oct. 8 showed the press for the first time its Bond machine, a new continuous dyeing and scouring machine which reportedly boasts great speed and amazing

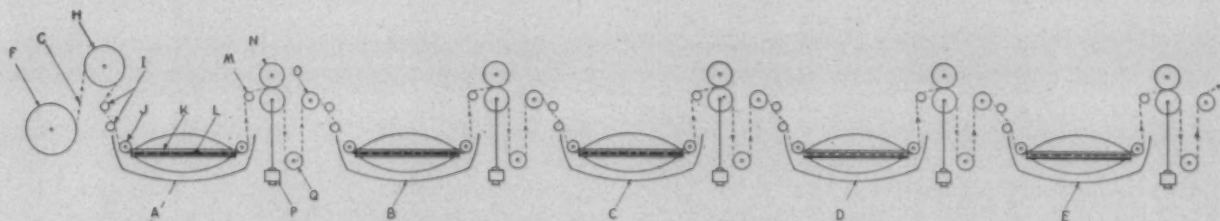


Boyce C. Bond demonstrates a pilot model of the Bond machine, which he invented, at the Philadelphia plant of the Hussong-Walker-Davis Co., which will manufacture the new continuous dyeing machine, sponsored by Pittsburgh Coke & Chemical Co. The Bond machine is expected to do better and speedier dyeing than is now possible. Unusual versatility and flexibility, as well as a high degree of compactness, are among the advantages claimed for the Bond machine by its inventor.

results in uniformity and penetration of any fabric from the finest knitgoods to carpet fabric. The new machine was invented by Boyce C. Bond, sales supervisor of the fine chemicals division of Pittsburgh Coke & Chemical, sponsors of the first full-scale Bond machine. The company will also bear the expense of initial advertising and publicity, while Hussong Co. manufactures it.

It was demonstrated at Philadelphia by the inventor with a 16-inch pilot model. This model is capable of operating at any speed from 20 to 120 yards a minute, while the full scale model under construction (to be completed in six months) will operate from ten to 120 yards a minute, according to type of fabric and type of dyestuff being used. The large model will be a 60-inch one. However, each manufacturer will have models custom-made for his particular use.

The new machine not only dyes and scours, but it can



Vat color dyeing with the Bond machine: (A) dyeing machine; (B) cold chemical machine; (C) rinse machine; (D) soaping off machine; (E) rinse machine; (F) gray goods supply; (G) fabric; (H) feed roll; (I) spreader bar; (J) guide roll; (K) upper injection plate; (L) lower injection plate; (M) spreader bar; (N) nip rolls; (O) idler roll; (P) range drive motor; and (Q) compensating gate.

be used for bleaching and for application of sizing to one side of a fabric or for application of waterproofing or mothproofing compounds. The pilot model has dyed with great success cotton, wool, rayon, acetate, high-tenacity rayon, nylon, Orlon, Dacron and blended fibers with uniform effect on the latter. Everything from tiny elastic tapes to 18-foot carpet can be handled with equal facility. All controls from one control unit are completely automatic.

Features include versatility in the types of dyestuff used, flexibility of short runs economically even down to 50 yards, better and speedier diffusion of dye solution throughout the fabric, great savings in dyestuffs because of new type of filter and economy of floor space. A full-scale model with five ranges will occupy only ten by 50 feet, one-third the present models of continuous dyeing machines.

Mr. Bond explained that the exceptional uniformity and speed lies in the two metal plates through which the fabric passes. The plates are perforated in a precisely calculated pattern which enables the dye solution to be squirted under equal pressure on both the face and back of the fabric. The many streams form an almost continuous sheet of solution to meet the fabric. The dye liquor is forced instantaneously throughout every fiber.

The big secret of the Bond machine is that it employs liquid pressure rather than mechanical pressure. Even pile fabrics, such as velvet, plush, corduroy and carpeting have been dyed with a minimum of crush or pile distortion. That is because a simple adjustment in the width of space between the plates can be made automatically to make room for each type of fabric.

In his demonstration, the inventor used an 8.2-ounce Army twill and bleached corduroy sewed together. It passed through the bath at a speed which immersed each fiber about one-half second. The result was an even finish and perfect penetration. Usual immersion is 19 seconds. He also dyed a cotton carpet fabric at a speed of 20 yards a minute and 80-pound pressure with amazing results.

This machine can apply all classes of dyestuffs, including vat, soluble vat, direct, acid, sulphur, acetate and naphthol. Colors can be mixed in the machine without regard to exhaust or affinity rating and with uniform results. Even cold dyeing vat colors have been mixed with hot dyeing vat colors. Vat colors can be applied by the pigment method, with or without drying after pigmentation. It can be used single or for continuous dyeing. The average machine will include five ranges. Fabric can be threaded quickly because of automatic pressure controls for the pressure units, also reducing accidents and minimizing maintenance.

## Encyclopedia Of Surface Active Agents

*Encyclopedia of Surface Active Agents*, by Sisley and Wood, recently published, will furnish for the wet processing of textiles a ready reference that the plant chemist, dyer, finisher and all technical personnel can use advantageously in identifying these increasingly useful ranges of textile auxiliaries without keeping up a very extensive file.

This excellent publication also will prove of great value to the laymen and purchasing agents in simplifying technical terms so that they can buy with greater assurance as to product wanted by the finishing plants.

The experienced technical personnel will not be required

to go to a great deal of explanation to less experienced assistants in describing products requiring checking for certain purposes as they can quickly use this publication as a ready reference and give these younger personnel a starting point that will make them prove of greater value to their companies.

## List 1951 Figures For Finished Fabrics

A total of 8,677 million linear yards of cotton, silk and synthetic fabrics was finished during 1951 it is reported by the Bureau of the Census, Department of Commerce. This was seven per cent below the 1950 total of 9,328 million linear yards. Of the 1951 total, cotton comprised 6,676 million linear yards and synthetics and silk 2,001 million.

Bleached and white finished goods totaled 3,403 million linear yards (cotton 3,234, synthetics and silk 168,955); plain dyed and finished goods totaled 3,627 million linear yards (cotton 2,040, silk and synthetics 1,586); printed and finished goods totaled 1,646 million linear yards (cotton 1,401, synthetics and silk 245).

A comparison between the total yardage of cotton, silk and synthetic fabrics finished and "off the loom" production of these fabrics during 1951 reveals that total yardage of cotton fabrics finished amounted to 66 per cent of gray goods production and for silk and synthetic fabrics, the total yardage finished amounted to 84 per cent of production. For 1951 more than 31 per cent of the 8,677 million yards finished were women's and children's dress and underwear fabrics. Fabrics finished against military contracts amounted to six per cent of the total yardage finished.

The bureau reported that 73 per cent of the total active printing machines in place as of Sept. 30, 1951, were primarily printing cotton fabrics.

## Book Themes Chemistry Of Synthetic Dyes

Academic Press, Inc., New York, announces publication of Volume II of *The Chemistry of Synthetic Dyes* by K. Venkataraman of the department of chemical technology, The University, Bombay, India. The publisher states that *The Chemistry of Synthetic Dyes* is an up-to-date comprehensive survey, in two volumes, of the entire field. The contents include the chemistry of intermediates and dyes, the application of dyes, the relation between color and the chemical constitution, the action of light on dyes, and the chemical constitution of dyes in relation to affinity for textile fibers. Chemists concerned with dyes and their applications will find this work invaluable.

## Detergents Highlighted In New Book

*Detergents—What They Are and What They Do*, Chemical Publishing Co., Inc., Brooklyn, N. Y., by Donald Price, Ph.D., technical director, Oakite Products, Inc. This new book brings detergents from the realm of specialized organic chemistry to the level of the average reader. Nevertheless it is a real technical book that reveals the chemical nature of the various groups of surface-active agents and illuminates the mechanism of their action in removing water hardness and wetting hard-to-wet surfaces. This informative book will prove of value to chemists, salesmen, purchasing agents and industrial users of detergents.

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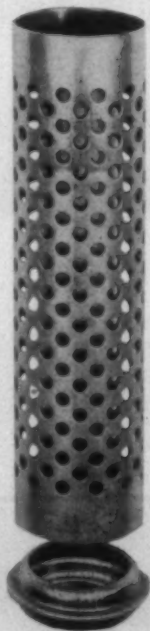
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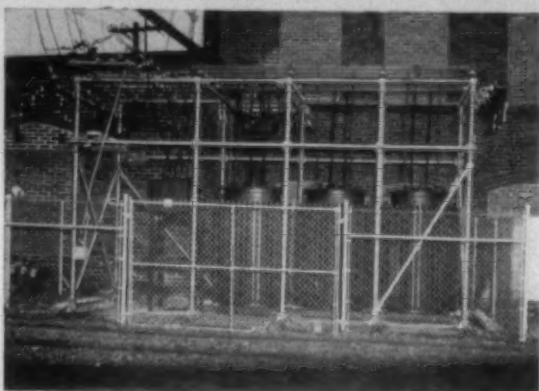


Photo showing Sub-Station structure furnished and installed by Southern Electric Service Company, Inc., Charlotte, North Carolina. This was designed for 2400 volts primary to 600 volts secondary for conversion to 4160 volts, 3 phase, Wye connection primary to 600 volts secondary.

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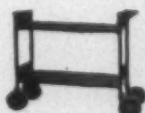
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Lift-trucks



Skids



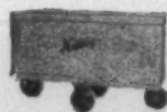
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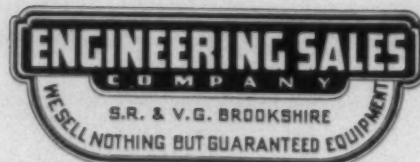


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## Some Advantages Of Correct Lighting

By LEO WALTER

SINCE many years efforts are being made by progressive plant management to improve working conditions in older textile mills. To make work pleasant for employed labor by providing better comfort conditions pays usually for itself from increased output per man-hour. The term "workers' comfort" might sound rather peculiar to many members of top management, because they immediately associate it with a new cafeteria or a new shower bath in the mill, or with a spacious locker room and the like. True, all the above contribute to the comforts of the employees, but they may or may not be regarded as a luxury, and much depends on the social outlook of management and of shareholders how far comfort of this kind is really required.

There is, however, another group of amenities for employees which produces a different type of comfort. Lighting, ventilating and heating as the predominant installations in this "essential" comfort group are part and parcel of the manufacturing process itself, and their highest efficiency should be outside any reflection regarding "luxuries" in a works. This statement will be elaborated in some detail in the following.

### Improved Vision and Lighting

Among the five human senses, seeing is perhaps the least obtrusive action in manufacture of goods, although the most important one. Excessive noise, bad odors, radiation of heat would soon cause objections on the part of the workers, although their actual nuisance value as regards output is much less than inadequate lighting. The fact, however, that bad lighting in private homes is so widespread makes workers less sensitive to darker surroundings at their place of work. Often unnoticed, bad eyesight of a worker combined with out-dated lighting facilities create discomfort, which may be less noticeable than coming from other sources, such as noise, or odors, but has a much more prominent influence on output. Let us now examine in some detail what eyesight can do to output.

### How the Eyes Work

The provision of good lighting cannot entirely prevent eyestrain with every kind of work. It may be impossible to see fine detail, even with excellent illumination, unless the eyes are brought very close to the object. To understand why this causes eyestrain, it is necessary to have some idea of the mechanism of the eye. To see clearly, the eye has to adjust its focus according to the distance of the object to be seen. If the object is focussed correctly it is

sharp and clear, and objects nearer or further away appear misty and blurred. Many people have done enough photography to understand the importance of correct focusing. In the eye, it is by altering the curvature of the lens that focussing is achieved, instead of by altering the distance between the lens and the sensitive film, as in the camera. This alteration of lens curvature is brought about by small muscles, and is normally done quite unconsciously and without effort. It is called "accommodation."

In addition to focussing, or accommodating for distance of view, the eyes make another adjustment—called "convergence"—by which both eyes are directed simultaneously on the same object. When the eyes change their focus, the muscles which cause convergence also come into play, and in this way we get single vision of the object looked at. But, if the strength of these muscles is not properly balanced, some of them will be strained in the effort to maintain proper convergence. To examine very small objects, we have to look very closely at them. In this process the muscles responsible for accommodation and convergence are called upon to work to full capacity. They cannot do so for long without getting tired. In some people, certain eye muscles are relatively weak, and are thus more easily fatigued if much close work has to be done.

### Spectacles for Close Work

Relief of the strain to which "close" workers are subjected—even when their vision and their eye muscles are normal—can be secured without difficulty by the use of spectacles.

If no such aid is used, and the task calls for very near vision, the worker will find it necessary to rest his eyes frequently by looking into the distance, thus relaxing the eye muscles. Without spectacles, the frequency and length of the necessary rests will obviously take up time which might otherwise have been spent in production. By using some artificial aid, and so limiting the effort required of the eyes themselves, workers will not only suffer less fatigue but will also get more work done. A similar principle is involved when, by using a jack to lift a motor car, or block and tackle to raise a heavy casting, the muscular effort required is reduced to a reasonable amount which is not rapidly fatiguing.

Of course, rests are taken by everyone, and they vary in length and frequency according to the nature of the work. Complaints of severe eyestrain are less common than they would be if no such defensive measure were adopted. But the absence of complaints does not necessarily mean that

a particular type of work is not trying to the eyes. When the need for good output is urgent—as at the present time—the risk of overstrain is greatest, even though its consequence can least be afforded.

Maximum output can be achieved only if the number and duration of the eye rests necessary to avoid undue fatigue are reduced to a minimum. These rest-pauses reduce the time available for effective work in two ways. The first way is obvious—the time occupied by the rest-pause is lost to production. The second way is not so obvious, but it is important—time is also lost after the rest-pause, since the eyes require an appreciable period in which to become refocused for near vision. This time, although influenced by the age and other characteristics of the eyes, is longer than is generally realized. Thus it is clear that if frequent rests for the eyes are necessary, much time will be lost for production. We certainly cannot afford to lose time unnecessarily, and, in any case, it is foolish to suffer needless strain by failure to provide or use scientifically designed aids to sight for difficult work.

Even persons of normal sight need spectacles when doing work that has very fine detail. Several types of suitable glasses are available. As a general rule, the use of glasses should be considered whenever the details of well-lighted work cannot be seen clearly unless the eyes are brought within ten inches of it. The use of such glasses does not make the worker dependent on them when not at work. They are intended only for use in the plant. Magnifiers which can be mounted on the bench are an alternative to spectacles, and these may sometimes prove more convenient.

#### Spectacles for Defective Sight

Many people experience eyestrain in doing ordinary work because they have defects of vision. In some plants the plant doctor tests the eyes of all new workers and advises those with defective vision to obtain glasses, prescribed by an expert, before starting work. This practice prevents much eyestrain and spoiled work, and is strongly to be recommended. Many people are unaware that they have slight defects of vision, and are pleasantly surprised at the improvement resulting from glasses. However, it cannot be too emphatically stated that the prescription of suitable glasses, like the prescription of suitable plant lighting, is a matter for the appropriate qualified expert, who must take into account the nature of the work as well as the vision of the worker. Unsuitable glasses may do much more harm than good.

#### How Improved Vision Affects Work

The use of suitable glasses will often provide immediate relief from eye strain, but in some cases the effect on output may become apparent only after a certain time has elapsed.

With experienced workers, the rate of work is the result of well-established habits, and habits are not quickly changed. Also, workers on delicate jobs may not be able to increase the rate of working, even with improved lighting and vision, until they have developed greater skill. The new worker has to become skilled both with his hands and with his eyes. This skill of the eyes is very important in relation to production, and is acquired only by experience. For example, the trained eye of a weaver sees a broken

thread in his warp much more rapidly than the untrained eye of the casual observer, even though the observer may have better vision than the weaver. However, the period of training and experience needed for acquiring visual skill may be considerably shortened by the use of glasses which make seeing easier and more comfortable.

#### Principles of Good Industrial Lighting

*The need for general brightness:* Light in the textile plant is required not only for the purpose of seeing the work easily. One of its most important functions is to brighten the whole surroundings in which work is done. Good lighting makes us feel cheerful, alert, and willing to work. Brightness and color influence our feelings, and these feelings have much to do with whether we are energetic and efficient or apathetic and inefficient. A dim plant is usually dismal and depressing; a bright one "as good as a tonic." It is not easy to over-rate the effects of brightness in the plant on the general outlook of the workers. Good general lighting is therefore important for this reason alone. And the general appearance of brightness will be much increased if walls and ceilings, plant and machinery are painted in pale colors, such as cream, instead of dingy greys and browns. Light colors also help to prevent glare, which is frequently due to the extreme contrast of a bright light seen against a dark background.

Good general illumination in all parts of the textile operation also has other obvious advantages. It permits safe and rapid movement of persons and materials about the plant; it makes supervision and cleaning easier, and it is sufficient for the satisfactory performance of the work.

*Lighting the job:* There are many jobs, however, for which the lighting needs special consideration. In order to avoid eyestrain, and also to get maximum efficiency, it may be necessary to provide additional local lighting, or perhaps to arrange for light to fall from a particular direction.

As everyone knows by experience, the finer the details to be seen, the better the light required. But it is not generally known that the amount of light needed increases much more rapidly than the "fineness" of the work. For example, if one job is twice as "fine" as another, much more than twice the illumination is needed to see it without undue difficulty. This is one of the laws of seeing disclosed by scientific investigation. Hence it may be necessary to have considerable differences in lighting for different jobs, in order to make it possible for each of them to be done, as far as possible, with equal efficiency and comfort. More than a hundred times as much light is needed for the "finest" as for the "roughest" work in textile manufacturing plants.

#### Measuring Light

Light can easily be measured with a light meter. This instrument can be obtained in a very small and convenient size for plant use, and it measures light in units known as foot-candles. The light meter is as easy to read as a thermometer, and should be widely known and used in order to keep a check on the illumination available and to encourage proper maintenance of lighting installations.

A more detailed consideration of the features of good plant lighting is impossible in a short space. For the best results, the advice and planning of the lighting specialist is necessary. The aim here is to indicate broadly the effects



to be aimed at, and to point out that good lighting is important, not only because it enables us to see our work well, but also because it makes us feel happier and more energetic. In many plants, the existing systems of lighting are good and attention to cleaning and maintenance is the chief need. In one plant it was recently found that lighting was improved by 50 per cent, after the fittings had been cleaned and dusted. The moral of this needs no stressing.

### Material Handling Survey Made Available

One of the most comprehensive surveys on material handling ever published is available from the consulting engineering firm of Wheeler-Brady, Inc., 15017 Detroit Ave., Cleveland, Ohio. This survey is part of the famous Wheeler-Brady cost reduction training program, now in use by major American firms. Among the subjects covered in the survey are: material handling principles, material handling equipment, changing existing methods, planning a new layout, warehouse and storage, increased capacity, product protection, safety, morale, obtaining better service, and increasing operating efficiency and lowering costs.

Also included is a valuable check sheet which will enable plant personnel to study and evaluate present material handling operations. It is also designed to test the present activities of operating personnel. This literature, published by Wheeler-Brady as a service to American industry, will be of tremendous aid to any user of material handling equipment, big or small. In addition to an examination of basic material handling theories and equipment, it details the more comprehensive aspects of this vital subject. The survey is already considered a bible by cost reduction minded companies.

### Unique Conference Arrangement Announced

A unique conference arrangement, to permit consideration of the problems of individual plants, will be a feature of the Plant Maintenance Conference, at the Public Auditorium, Cleveland, Ohio, Jan. 19-22. An unprecedented effort will be made to permit every visitor to have his specific questions answered by experts from all major industries.

Facilities in panels, conferences and roundtables will make possible the treatment of approximately 5,000 individual problems, in addition to the reading of prepared papers and four plant tours. Eight sectional conferences and 21 roundtables will be held over two-day periods to encourage visitors to consider discussions overnight and submit questions based on their own experiences. Separately, on the floor of the Plant Maintenance Show, which will be held at the same time, about 1,500 experts representing 300 exhibitors will be on hand to answer further questions concerning equipment.

Eleven major industries will have sessions of their own to allow intensive discussions of single industry problems. Also, conferences will be divided into separate groups according to the size of plant. Top management maintenance problems, common to all industry, will be treated in panels which all will attend.

### Materials Handling Exposition May 18-22

The fifth National Materials Handling Exposition, which will be held at Convention Hall, Philadelphia, Pa., May 18-22, will be the largest capital goods show to be held

anywhere in the country during 1953, it was announced recently by Clapp & Poliak, Inc., New York, the exposition management.

The exposition, held for the first time in 1947 and now in the first rank among industrial shows, is expected to attract 25,000 visitors from 40 countries. Negotiations are now under way for reservations of hotel space in New York and Atlantic City to provide for the overflow from Philadelphia hotels. A study made at an earlier show revealed that 90 per cent of those who attend are directly responsible for authorization or recommendation of purchase of capital goods for their companies.

All six halls of the huge convention hall will be used to house exhibits and a covered railroad siding also will be occupied.

The Material Handling Institute, organization of handling equipment manufacturers, will sponsor the exhibition. Concurrently with the show, the American Materials Handling Society, composed of executives of companies which use materials handling systems, will conduct a series of conferences.

Ninety-eight per cent of available exhibition space was sold earlier this year. Two hundred and fifty-five companies will display handling equipment. Many will operate their machines to demonstrate use under simulated factory conditions.

Pullman-Standard Car Mfg. Co. will show its new freight cars and explain loading methods on the railroad siding. Eleven other companies will have tremendous exhibits covering from three to seven thousand square feet. These include Automatic Transportation Co., Chicago; Baker-Raulang Co., Cleveland; Barrett-Cravens Co., Chicago; Buda Co., Harvey, Ill.; Clark Equipment Co., Battle Creek, Mich.; Frank G. Hough Co., Libertyville, Ill.; Hyster Co., Portland, Ore.; Lewis-Shepard Products, Inc., Watertown, Mass.; Towmotor Corp., Cleveland; Tractomotive Corp., Deerfield, Ill., and Yale & Towne Mfg. Co., Philadelphia.

Advance registration cards and hotel information may be obtained from Clapp & Poliak, Inc., 341 Madison Avenue, New York 17, N. Y.

### Publish Biography Of Eli Whitney

*The World of Eli Whitney*, by Jeanette Mirsky and Allan Nevins, Macmillan Co., New York, \$5.75. Called the first modern study of an American genius, this book should find a wide and appreciative audience among those engaged in the textile field. Eli Whitney is described as a man of ideas, an important contributor to the industrial revolution in America and the father of mass production. The basis of this important biography, the only modern study of Whitney, is the hitherto unpublished collection of family papers. Wherever possible, Whitney's personal story—his dealings with Stiles, Jefferson and Fulton, his relationship with the fascinating widow of Nathaniel Greene, his marriage to a granddaughter of Johnathan Edwards—is told in his own words. The authors' scholarship is impressive and their brilliant interpretation of the impact on history of a great man's inventive genius is illuminating and thoroughly adult.

Everyone in a small town knows what everyone else is doing. They read the newspapers merely to see if they have been caught at it.—*Elberton (Ga.) Star*.



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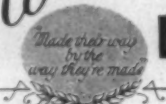


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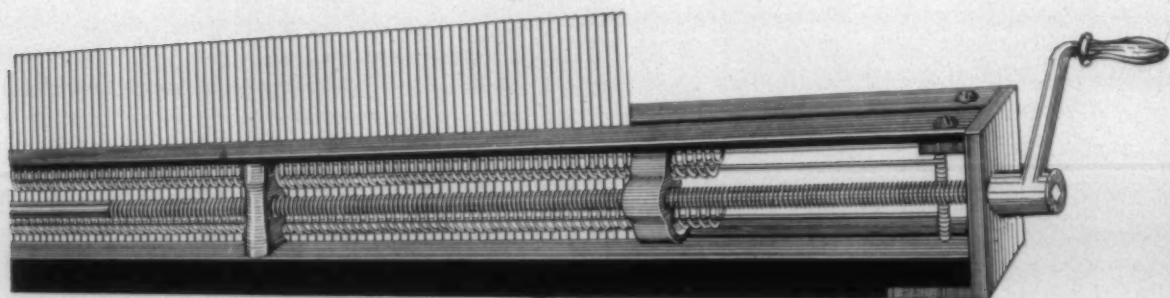
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## PERSONAL NEWS



Prof. John E. Foster on Nov. 1 assumed the presidency of the New Bedford (Mass.) Textile Institute, succeeding George Walker, president for 16 years, whose retirement became effective that day. The new president is a native of New Bedford and a 1929 graduate of the institute. He became a member of the institute's faculty in 1934 and has served continuously except for time spent in the service during World War II.



Tate M. Robertson, Jr., recently was appointed sales manager of the corn products department of the yeast, malt and corn products division of Anheuser Busch, Inc. Mr. Robertson has been with the company for many years and will continue the policy of offering industrial users both technical assistance and uniform high-quality starch products.



Harold C. Whittemore, Jr., has been appointed vice-president of Warwick Chemical Co., a division of Sun Chemical Corp. Mr. Whittemore joined Sun Chemical in 1946 and served five years with the firm in Chicago. His most recent position has been assistant to the president at Sun's headquarters in New York. In his new capacity his headquarters will be at the Wood River Junction, R. I., plant.



Dr. Carlyle G. Caldwell has been elected as assistant vice-president of National Starch Products, Inc. A native of Little Rock, Ark., Dr. Caldwell graduated from Iowa State College in 1936, and received a Ph.D. degree in chemistry from the same institution in 1940 at which time he joined National's research staff, and he has been research director since

1948. Dr. Caldwell, a recognized authority on starches, adhesives and resins, is author or co-author of many of National's significant patents.



T. J. Jackson (*left*) recently became associated with Howard Bros. Mfg. Co. as a sales representative to serve the field formerly covered by K. M. Crytz, who has resigned to enter business for himself. Mr. Jackson is a native of Selma, Ala., and is a graduate of Alabama Polytechnic Institute where he majored in textile engineering. His previous associations include U. S. Rubber Co. and Gates Rubber Co., Mr. Jackson serving the latter concern as textile specialist and sales engineer.



Bliss M. Jones recently resigned as general sales manager of Rodney Hunt Machine Co., Orange, Mass. Mr. Jones joined the firm in 1938 and was head of the textile machinery division a number of years before being made general sales manager about two years ago. He will make known his future plans later.



Hans Stauffer was elected executive vice-president of Stauffer Chemical Co. at a recent meeting of the company's board of directors. Mr. Stauffer has been vice-president and the general manager of the company since 1941.



John H. Hennessey, after 29 years with General Dyestuff Corp. at Philadelphia, Pa., and Charlotte, N. C., has joined Berkshire Color & Chemical Co. of Delaware, N. J., as vice-president. His duties will include the direction of new product development. A 1922 graduate of the Philadelphia Textile Insti-

tute, Mr. Hennessey is a past treasurer of the New York Section of the American Association of Textile Chemists & Colorists and is the present vice-chairman of the A.A.T.C.C. unit.



H. O. Ball (*left*) has been elevated from vice-president to president of Pepperton Cotton Mills, Jackson, Ga., succeeding the late B. A. Wright. Mr. Ball, who is a former president of the Cotton Manufacturers Association of Georgia, has been connected with Pepperton since 1903. . . . W. O. Ball, treasurer, has been elected to serve also as vice-president of the firm.



Harlan C. Pruett has been appointed general manager of Colloids of Carolina, Inc., High Point, N. C., a subsidiary of Colloids, Inc., Newark, N. J., manufacturer of processing chemicals for the textile trade. Prior to becoming associated with Colloids of Carolina, Mr. Pruett held managerial positions with Textron Southern, Inc., Burlington Mills Corp., and Frank IX & Sons.



John G. Sibley has recently joined the research and development department of the Wica Co., Charlotte, N. C. Mr. Sibley formerly was associated with the Charlotte Chemical Laboratories and the Solvay Process Division, Allied Chemical & Dye Corp., as a chemist.



Samuel H. Huffstetler has joined the firm of Parrott & Ballentine, Greenville, S. C., manufacturers agents for Smith, Drum & Co., Van Vlaanderen Machine Co., H. Brinton Co., and Haskeel-Dawes Machine Co. A 1947 graduate of N. C. State College, Mr. Huffstetler was



## PERSONAL NEWS

with Burlington Mills Corp. before joining Parrott & Ballentine. He will make his headquarters at 932 Hill Street, Greensboro, N. C.



M. Ray Harden, manager of Mill No. 8 of Erwin Mills, Inc., at Stonewall, Miss., recently was elected a member of the board of directors of the Mississippi Manufacturers Association.

J. W. Dickert, formerly with Tennessee Eastman Co., Kingsport, Tenn., has joined the sales staff of Saco-Lowell Shops with headquarters at the firm's Greenville, S. C., office.

Leonard A. Yerkes, Jr., has been named assistant manager of Dacron polyester fiber sales of the textile fibers department of E. I. du Pont de Nemours & Co. Mr. Yerkes was formerly assistant manager of Orlon acrylic fiber sales. He will continue to be stationed at the company headquarters in Wilmington, Del. . . . Richard W. Trapnell, III, who has been district manager of Orlon sales at Charlotte, N. C., for about a year, is being transferred to Wilmington and will

succeed Mr. Yerkes as assistant manager of Orlon sales there. A. D. Irving, II, assistant district manager in New York for nylon sales, is being transferred to Charlotte where he will succeed Mr. Trapnell as district manager of Orlon sales.

Ernest M. May has been named president of Otto B. May, Inc., Newark, N. J., succeeding his father, Dr. Otto B. May, founder and president of the firm, who died Oct. 26.



J. H. Canady has joined the sales force of Southern States Equipment Corp., Hampton, Ga. For the past four years Mr. Canady has been superintendent and manager of Montgomery (Ala.) Cotton Mills and prior to that was superintendent of

the Catherine and Central plants of Avondale Mills, Sylacauga, Ala., for eight years. He has about 25 years of experience in the cotton textile industry.

Larry Thompson has been named technical manager of the newly-formed cotton section in the technical department of General Dyestuff Corp. The cotton section contains four departments which will be headed respectively by Tom Walsh, vats; Bert Cel-

entano, naphthol; Ernie Taylor, direct and sulfur; and Ulrich Hutten, mixed fiber.

Frank H. Hillery and Joe L. Jennings recently were elected to the board of directors of Wellington Sears Co., Inc., at its annual stockholders meeting. Mr. Hillery is in charge of the company's export and government departments at its headquarters in New York. He joined Wellington Sears in 1909 and has been a vice-president since 1941. Mr. Jennings is executive vice-president and a director of the West Point (Ga.) Mfg. Co.

Henry A. Wells recently was named technical representative in the Southern sales district for the textile colors division of Interchemical Corp. Mr. Wells, who formerly was assistant service manager of Interchemical, will make his headquarters at Rock Hill, S. C.



Arthur W. Kurz, Jr., of Detroit, Mich., has been appointed vice-president in charge of engineering of Hunt Loom & Machine Works, Inc., Greenville, S. C. Mr. Kurz has a diversified background of engineering experience and before

joining Hunt was chief engineer of Dolphyn Engineering Corp., Detroit. He was educated at Wayne University and Michigan State College.

Friends of R. M. (Mac) Mauldin, who was a selling agent for Universal Winding Co. at Charlotte, N. C., until a stroke forced him to retire from those duties, will be interested in learning that Mr. Mauldin has recovered to a degree which has allowed him to accept a position in the cost department of the Branson Co. at Monroe, N. C.

Robert B. Reed, for the past three years sales engineer in the Birmingham, Ala., area for Reliance Electric & Engineering Co., has been transferred to the company's Detroit, Mich., office. . . . Rex T. Willard of Reliance's Atlanta, Ga., office, replaces Mr. Reed in the Birmingham area.

Paul D. Kaley has been named manager of the new district sales office of the fiber glass division of Pittsburgh Plate Glass Co. at 30 Rockefeller Plaza, New York City. Associated with the fiber glass industry since 1941, Mr. Kaley is a graduate of North Carolina State College with a B.S. in textile manufacturing. . . . H. J. Bygott, Jr., has been appointed Washington, D. C., district manager with headquarters at 1545 New York Avenue, N.E. Mr. Bygott has been with Pittsburgh Plate Glass Co. since 1935 and is a graduate of Villanova College with a degree in civil engineering.

George W. Little has been named resident manager of the Hartsville, S. C., plant of United States Finishing Co., succeeding J. J. Mowry, now acting president of the firm and general manager of the Hartsville plant. Mr. Little joined the firm in 1935, one year after his graduation from Harvard Business School, and has served continuously with the exception of two years (1943-44) when he left to become superin-

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tendent of printing and dyeing at the Lyman (S. C.) Division of Pacific Mills. Prior to his recent appointment Mr. Little was general superintendent of the firm's plant at Norwich, Conn.

R. Carl Dick, Jr., vice-president of the Pequot Plant of Naumkeag Steam Cotton Co. at Whitney, S. C., has been elected vice-president of the recently-organized Spartanburg (S. C.) Camera Club. A skilled lensman, Mr. Dick is a former president of the North Shore Camera Club of Salem, Mass.

L. K. Fitzgerald, formerly director of research and development, has been promoted to the newly-created post of co-ordinator of merchandising and manufacturing at Dan River Mills, Danville, Va. H. Y. Jennings, who formerly served as director of research under Mr. Fitzgerald, has been elevated to the post of director of research and development and will be in charge of the company's research laboratories and pilot plant. . . . Roy M. Stephens, previously top aide to General Superintendent Raymond Henderson, has been promoted and given wider responsibilities as superintendent of the company's Riverside Division. . . . Recent supervisory changes at Schoolfield Division 2 follow: Jessie Jones has been transferred from the Riverside Division to replace A. B. Lee as technical superintendent for Schoolfield Division 2. A. B. Lee has replaced Malcolm J. Hundley as general overseer, 3 dress and twist; Mr. Hundley has been named assistant section superintendent of carding and spinning.

K. Lanse Turner, who completed three and a half years with the Textile Research Institute, Princeton, N. J., recently was named director of the Cotton Research Committee of Texas. He will make his headquarters at Texas Tech. The committee has branches at Texas Tech, Texas A. & M. and at the University of Texas.

Willfred W. Lufkin, Jr., has been elected president and chief executive officer of Wellington Sears Co., Inc., textile merchants, succeeding Richard G. Conant who becomes chairman of the board. Mr. Lufkin was formerly executive vice-president of the company. Mr. Conant will continue as a member of the executive committee of West Point Mfg. Co. and a director of that company and its subsidiaries. He has been associated with Wellington Sears Co., Inc., for 27 years and was its president since 1945.

Robert W. Armstrong has resigned from Dan River Mills, Inc., Danville, Va., after eight years principally occupied in advertising and sales promotion in New York and Danville. During two years' absence from Dan River he was active in the development and sale of the Warner & Swasey Sulzer weaving machine. His future plans have not been announced.

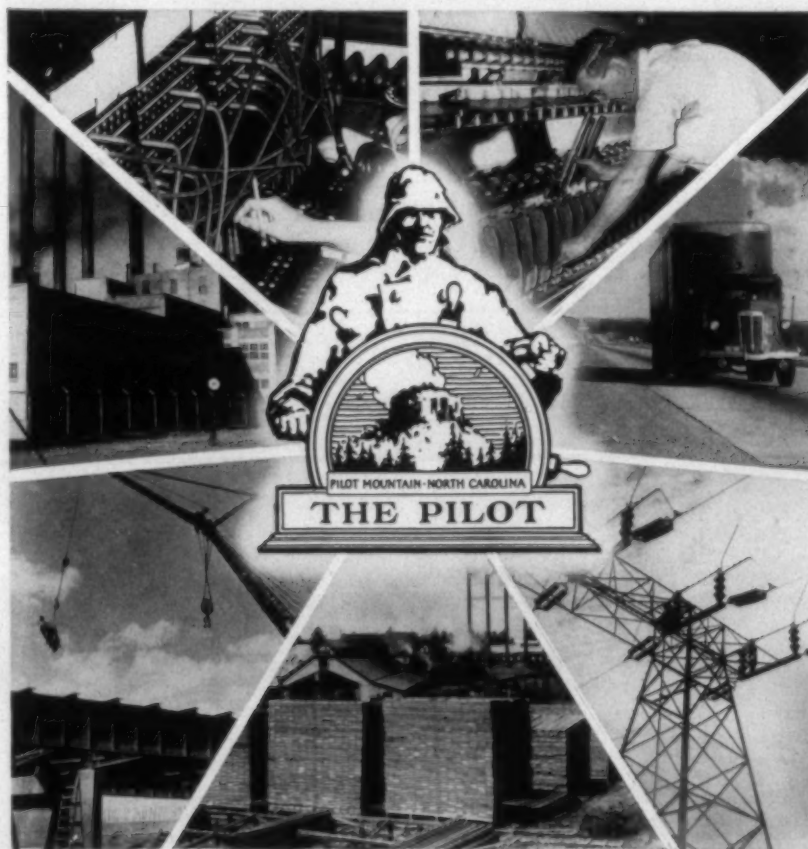
Dr. Max Y. Seaton has been named senior vice-president and technical co-ordinator of the chemical divisions of Food Machinery and Chemical Corp. F.M.C. chemical divisions include Westvaco, Niagara, Ohio-Apex, and Buffalo Electrochemical Co. Formerly executive vice-president of Westvaco chemical division, Dr. Seaton's office will be in the Chrysler Building East, New York

City, where the newly-created Eastern administrative headquarters of all F.M.C. chemical operations are located. The position of executive vice-president of the Westvaco chemical division has been discontinued and William B. Thom, president of Westvaco, and William N. Williams, operating vice-president of Westvaco, will assume the responsibility for the former activities of this office.

Alfred H. Milask has been appointed Eastern sales manager of chemical products sales for the Atlantic Refining Co. and transferred to the company's headquarters in Philadelphia. Since 1948 he had been serving as sales representative for Atlantic's Southern territory, operating out of the regional offices in Charlotte, N. C. He has been succeeded at Charlotte by Willard E.

Smith, who joined the company after nine years' experience in chemical research and sales engineering in the Southern textile industry. Mr. Milask became associated with Atlantic in 1939. After three years' service in the company's Philadelphia refinery, he was transferred to the research and development department as an associate chemist, the post which he held until he received his Southern assignment. He is a member of the American Association of Textile Chemists and Colorists and the American Chemical Society.

Arthur R. Thompson of Ciba Co. has been elected president of the North Charlotte Rotary Club, which was organized at Charlotte, N. C., Sept. 27. M. L. Brackett of Highland Park Mfg. Co. was elected vice-president and a director of the club. Other



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## PERSONAL NEWS

charter members of the club include Lewis R. Briggs of Johnston Mfg. Co., John R. Hopkins of Becco Sales Corp. and Dwight L. Turner of Arnold Hoffman & Co.

Drs. George B. Hughey, Kenneth Johnson and Messrs. Paul D. Emerson, George Kazan, Jr., and Michael Kwasin recently were appointed to supervisory positions at the Chemstrand Corp. nylon manufacturing and process plant now under construction at Pensacola, Fla. Dr. Hughey was named area technical superintendent of intermediate operations, Dr. Johnson was named textile area superintendent, Mr. Emerson was named area technical superintendent of yarn operations, Mr. Kazan was named area superintendent of the adipic acid plant and Mr. Kwasin was named area superintendent of the adiponitrile and diamine areas. . . . Dr. J. Keith Lawson, Jr., formerly with E. I. du Pont de Nemours & Co., Inc., and American Viscose Corp., has been appointed to a supervisory post in the research and development department at Chemstrand's new research center at Decatur, Ala.

Robert Gow has been appointed sales manager of the newly-created textile division of Reichold Chemicals, Inc., and will make his headquarters at the firm's recently-completed plant and office at Charlotte, N. C.

Robert J. Gurney, president of Gastonia (N. C.) Combed Yarn Co., was honored recently at a dinner party in Charlotte,

N. C., in recognition of his service to the Jewish people and his service to humanity. Mr. Gurney was presented three scrolls: one from the State of Israel, one from Temple Emanuel in Gastonia and one from Temple Israel in Charlotte. Mr. Gurney is North Carolina chairman of the campaign to raise money for the new-founded State of Israel.

James L. Coker, president of Sonoco Products Co., Hartsville, S. C., recently was elected an honorary director by the National Fibre Can and Tube Association. He was presented a scroll. Mr. Coker has held numerous offices in the association; he is resigning as a director, but will continue his membership.

J. L. Channell, manager of the Opp and Micolas Cotton Mills at Opp, Ala., recently was elected to the city council of Opp, receiving the highest vote ever given for that civic position.

Robert C. Cunningham has been transferred from the Clarksville (Ga.) Mill of United Merchants & Manufacturers to the organization's Seminole Plant at Statesville, N. C., as general overseer of the weave room on the second shift.

I. F. Craven, president and treasurer of Columbia Mfg. Co., Ramseur, N. C., was honored by the citizens of Ramseur Oct. 31 on the occasion of his 80th birthday anniversary. The day was designated "I. F. Craven Day" and the mayor declared an official holiday in the town. A gay nineties parade was followed by a football game at which, during half-time ceremonies, the eight-acre

athletic field was dedicated "I. F. Craven Field." Mr. Craven donated the land for the athletic field and contributed most of the money spent on putting the area into condition for athletic events.

William Lowndes, Jr., president and treasurer of Southern Weaving Co., and Jim Christopher, personnel director of Mills Mill, a unit of Reeves Bros., Greenville, S. C., are serving as co-colonels of the textile division in the Community Chest campaign in Greenville. A minimum goal of \$266,991 has been set for their division.

William H. Ruffin of Durham, N. C., president and treasurer of Erwin Mills, Inc., and a past president of the National Association of Manufacturers, recently was elected to the general board of directors of Wachovia Bank & Trust Co., Winston-Salem, N. C.

M. Lee Hanna has resigned as superintendent of the Cascade rayon plant of Burlington Mills Corp. at Mooresville, N. C. Mr. Hanna did not disclose his future plans. At present his post is being filled by W. H. Spencer, group supervisor of the Newton, N. C., and Cascade plants for the past year.

E. J. Adams has been named Southern district manager for the heavy chemicals department of American Cyanamid Co. Mr. Adams, who joined American Cyanamid Co. in 1935, will make his headquarters in Charlotte, N. C., and will supervise sales in an area from Richmond, Va., to Texas.

E. R. Van Vliet, formerly vice-president and treasurer of Tubize Rayon Corp., has been named vice-president and treasurer of Mathieson Chemical Corp., Baltimore, Md., following expansions and merger with E. R. Squibb & Sons. . . . John C. Leppart continues as executive vice-president of the firm. Stanley deJ. Osborne, financial vice-president, will direct the activities of the financial and auxiliary departments. . . . Operations, sales and development activities are placed in four major divisions of Mathieson to be known as: Mathieson Development Co., Carl F. Prutton, president; Mathieson Industrial Chemicals Co., Donald W. Drummond, president; Mathieson Agricultural Chemicals Co., S. L. Nevins, president, and E. R. Squibb & Sons, Theodore Weicker, Jr., president. . . . Other officers of Mathieson appointed are J. V. Joyce, vice-president and comptroller; C. S. Gage, vice-president in charge of purchasing, and A. P. Winsor, secretary.

K. C. Loughlin of Charlotte, N. C., a vice-president of Celanese Corp. of America, has been named to serve as general manager of the Celanese textile division with full responsibility for management of the textile operations of the company. Mr. Loughlin formerly was general sales manager of the textile division. . . . E. W. Best has been elevated to the post of sales manager of acetate filament yarn, textile division, succeeding J. Guyton Boston who was recently named general sales manager of the division. W. D. Clark, Jr., was named district sales manager of the Southern district, textile division, replacing Mr. Best. . . . G. W. Seymour, vice-president of Celanese, has been named to the newly-established corporation post of co-ordinator

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Length . . . . . " Width . . . . . " Thickness . . . . . " Size of slot . . . . . "

Name . . . . . ☐ 1/4" ☐ 3/8" ☐ 1/2" ☐ 5/8" ☐ 3/4" ☐ 7/8" ☐ 1" ☐ 1 1/4" ☐ 1 1/2" ☐ 1 3/4" ☐ 2" ☐ 2 1/4" ☐ 2 1/2" ☐ 2 3/4" ☐ 3" ☐ 3 1/4" ☐ 3 1/2" ☐ 3 3/4" ☐ 4" ☐ 4 1/4" ☐ 4 1/2" ☐ 4 3/4" ☐ 5" ☐ 5 1/4" ☐ 5 1/2" ☐ 5 3/4" ☐ 6" ☐ 6 1/4" ☐ 6 1/2" ☐ 6 3/4" ☐ 7" ☐ 7 1/4" ☐ 7 1/2" ☐ 7 3/4" ☐ 8" ☐ 8 1/4" ☐ 8 1/2" ☐ 8 3/4" ☐ 9" ☐ 9 1/4" ☐ 9 1/2" ☐ 9 3/4" ☐ 10" ☐ 10 1/4" ☐ 10 1/2" ☐ 10 3/4" ☐ 11" ☐ 11 1/4" ☐ 11 1/2" ☐ 11 3/4" ☐ 12" ☐ 12 1/4" ☐ 12 1/2" ☐ 12 3/4" ☐ 13" ☐ 13 1/4" ☐ 13 1/2" ☐ 13 3/4" ☐ 14" ☐ 14 1/4" ☐ 14 1/2" ☐ 14 3/4" ☐ 15" ☐ 15 1/4" ☐ 15 1/2" ☐ 15 3/4" ☐ 16" ☐ 16 1/4" ☐ 16 1/2" ☐ 16 3/4" ☐ 17" ☐ 17 1/4" ☐ 17 1/2" ☐ 17 3/4" ☐ 18" ☐ 18 1/4" ☐ 18 1/2" ☐ 18 3/4" ☐ 19" ☐ 19 1/4" ☐ 19 1/2" ☐ 19 3/4" ☐ 20" ☐ 20 1/4" ☐ 20 1/2" ☐ 20 3/4" ☐ 21" ☐ 21 1/4" ☐ 21 1/2" ☐ 21 3/4" ☐ 22" ☐ 22 1/4" ☐ 22 1/2" ☐ 22 3/4" ☐ 23" ☐ 23 1/4" ☐ 23 1/2" ☐ 23 3/4" ☐ 24" ☐ 24 1/4" ☐ 24 1/2" ☐ 24 3/4" ☐ 25" ☐ 25 1/4" ☐ 25 1/2" ☐ 25 3/4" ☐ 26" ☐ 26 1/4" ☐ 26 1/2" ☐ 26 3/4" ☐ 27" ☐ 27 1/4" ☐ 27 1/2" ☐ 27 3/4" ☐ 28" ☐ 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of process and technical control. In his new position, Mr. Seymour will be responsible for co-ordinating and maintaining liaison among the corporation's three operating divisions—textile, plastic and chemical.

## OBITUARIES

**C. B. Buchanan**, 71, retired textile executive of Andalusia, Ala., died recently. A veteran of many years in the industry, Mr. Buchanan retired about a year ago from Lane Cotton Mills Co., New Orleans, La., his last affiliation. During World War I he was in charge of Magnolia (Miss.) Mills and later was with a number of textile concerns in Georgia and Alabama.

**Martin L. Cannon, Sr.**, 67, nationally-known textile manufacturer of Charlotte, N. C., died Oct. 30 at a hospital in New York City. Mr. Cannon attended Virginia Military Institute and the University of North Carolina. From 1916 to 1921 he was president of Cannon Mills Co., which was founded by his father. Through the ensuing years until 1946, Mr. Cannon was actively engaged in the textile industry and held high official positions in various corporations. In 1946, he sold the greater part of his textile interests but continued to administer his financial affairs from offices in Charlotte. Early in his business life, in 1909, he became secretary-treasurer of the Imperial Cotton Mills and later became this corporation's president. He relinquished that office in 1927. He was president of Social Circle (Ga.) Cotton Mills from 1915 to 1946. During 25 years he was president of Carolina Textile Corp. and Davidson (N. C.) Cotton Mills, which interests he sold in 1946. Also, Mr. Cannon was a director of Cannon Mills, of the Jefferson Standard Life Insurance Co., the Wiscasset Mills of Albemarle, N. C., and of Charlotte's American Trust Co. Surviving Mr. Cannon are his wife, two sons and a daughter, three sisters and one brother, C. A. Cannon, president of Cannon Mills.

**Bradley Coleman**, 42, an engineer at the Renfrew Bleachery of Abney Mills at Travelers Rest, S. C., died Oct. 15 of a heart attack. He is survived by three sisters and four brothers.

**David S. Cook**, 51, vice-president in charge of manufacturing at the Clinton and Lydia Cotton Mills, Clinton, S. C., died Oct. 24 after a short illness. A graduate of the Philadelphia Textile Institute, Mr. Cook became associated with the Clinton and Lydia Cotton Mills after previously having been connected with West Point (Ga.) Mfg. Co., Pepperell Mfg. Co., and Highland City Mills, Talladega, Ala. Survivors include his wife, two daughters, two sisters and three brothers.

**Simeon R. Cross**, 45, secretary and treasurer of Cross Cotton Mills Co., his daughter, Elizabeth, 14, and two preparatory school students were killed near Marion Nov. 3 in the crash of a single-engine private plane. Mr. Cross was returning the two students to their school at Black Mountain, N. C., when the crash occurred. Mr. Cross is survived by his wife, his mother, a brother and a sister.



**Dr. Gustavus J. Esselen**, 64, vice-president and director of the Esselen research division of United States Testing Co. at Boston, Mass., died Oct. 22 at his home in Swampscott, Mass. Dr. Esselen gained a world-wide reputation as an authority on cellulose chemistry and contributed to the basic patent on melamine resins. He helped develop the first continuous production process for high

tenacity viscose rayon and also developed durable finishes for crease-proofing fabrics. A lecturer and writer of note, Dr. Esselen served for many years as associate editor of *The Textile Research Journal*. Surviving are his wife, two daughters, a son and a brother.

**Ralph L. Marble**, 53, general superintendent of Curtis & Marble Machine Co., Worcester, Mass., died suddenly Oct. 16 in Charlottesville, Va. Mr. Marble was returning to Worcester after having attended the Southern Textile Exhibition at Greenville, S. C. His wife, his father and a brother survive. His father is president of the company.



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# MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

**GREAT FALLS, S. C.**—Republic Cotton Mills, a unit of J. P. Stevens & Co., Inc., recently closed bids for an addition to the No. 3 Plant which will include extensions in the picker room, carding and spinning departments.

**GREENVILLE, S. C.**—Superba Mfg. Co. began operations here recently, utilizing about 100 looms in the production of cotton huck towels and napkins. Superba occupies the former Steel Heddle Mfg. Co. plant on East McBee Avenue which has 30,000 square feet of space on two floors and a basement. The new firm is capitalized at \$130,000 with Stuart C. Whiteside of New York as president and Frank C. Bowers, also of New York, as treasurer.

**MARION, N. C.**—Clinchfield Mfg. Co. observed "open house" recently, celebrating the completion of a modernization and expansion program launched in July, 1950. Improvements accomplished include installation of air conditioning, new lighting, new warehouses and additional machinery. Clinchfield now utilizes 81,000 spindles and 1,900 looms in the production of print cloths.

**GASTONIA, N. C.**—Textiles, Inc., recently announced plans for selling all company-owned houses in the village of its Pinkney Plant here. Priority will be given to employees of the Pinkney Plant.

**GREENVILLE, S. C.**—White Horse Mills, the first complete bale-to-cloth cotton mill ever erected, is now undergoing a major expansion program provided for in the original structure when it was built by the Daniel Construction Co. of Greenville, S. C., and Birmingham, Ala. This expansion will increase the capacity of the mill by about 6,000 new spindles and 120 looms. Highlighting the many unique construction

features of this one-story, air conditioned structure, is a basement which has been provided as an integral part of the building. Ramps and elevators provide easy access for lift trucks to the one-floor production area. A central service section through the middle of the mill houses cafeteria and wash room facilities for employees and isolates the various sections within the plant, at the same time providing for easy materials handling throughout the mill. Following the completion of this expansion program, additions will be made to the work force. This company is affiliated with the Maverick Mills Co. of Boston, Mass.

**LANETT, ALA.**—Completion of an \$800,000 modernization program in the near future will put the Lanett Bleachery & Dye Works in the best competitive position in its history, John A. Simmons, president, told the board of directors at a regular quarterly meeting in Atlanta, Ga., recently. The two-year program includes addition of 40,000 square feet of space to the Lanett plant, which will enable the company to co-ordinate certain production activities and reduce costs, Mr. Simmons pointed out. This is a major part of the over-all building and new equipment program. The report for the fiscal year ended Aug. 30, 1952, reflected curtailment in operations and an extremely competitive price situation. Sales were \$8,910,838, only 3.2 per cent under 1951, but the profit margin was much less, Mr. Simmons reported. Earnings after taxes were \$288,296 as compared with \$588,272 for the previous year, he added, while the plant finished 56,703,697 yards of cloth this past year as compared with 64,762,143 in 1951. "Due to the uncertainties of the textile industry as a whole, especially after such a depressed year," Mr. Simmons said, "no one is in a position to make any optimistic predictions. However, I must add that our

company is in a favorable position as our fiscal year begins." Lanett Bleachery & Dye Works employs about 1,350. It bleaches, dyes, prints and treats textile products.

**CHATTANOOGA, TENN.**—Approval of plans for the expansion of facilities to increase the manufacture of continuous filament nylon yarn at Du Pont's nylon plant here was announced Oct. 31 by W. H. Thalheimer, manager. This action followed the completion of a study announced last August "to determine the possibility of a new expansion of nylon yarn production at the plant here." Mr. Thalheimer stated that as soon as design work is completed, construction work will start, perhaps by late Spring of 1953, and will be finished sometime in 1955. "Equipment similar to that already installed will be added," Mr. Thalheimer said, "and the cost of the program might exceed \$9,000,000." The plant started operations in July, 1948, and since that time there has been nearly continuous expansion work, Mr. Thalheimer pointed out. He said that the new facilities will require approximately 350 additional people to operate. Employment at present is about 3,100.

**NORFOLK, VA.**—Dan River Mills, Danville, recently announced that it plans to discontinue operation of its filament rayon weaving plant here. The plant employs about 200. Operations will continue until present warps run out, probably in December. A Dan River official stated that present economic conditions did not justify operating the plant as a separate unit from the main plant. All other manufacturing operations of the firm are situated in Danville.

**CONVERSE, S. C.**—A new weaving mill, constructed at a cost of \$850,000 by Clifton (S. C.) Mfg. Co., is now in operation here. Known as the No. 9 Mill of Clifton Mfg. Co., the plant currently utilizes 100 looms with another 100 scheduled for installation shortly. Plans call for eventual installation of a total of 600 looms.

**TRYON, N. C.**—The new \$2,000,000 plant of Kilburn Mills here is nearing completion and some portions of the plant already are in production. The new Kilburn facility will produce threads of many varieties.

**CHESNEE, S. C.**—The housing improvement program at Chesnee Mills, a unit of Reeves Bros., Inc., is nearing completion. All 150 houses of the mill village will be improved. The over-all program consists of both inside and outside work.

**NEW YORK, N. Y.**—The possibility of setting up wool and synthetic combing facilities in the Southeast is being investigated by Associated Spinners, Inc., it was disclosed recently by Ralph Tager, treasurer. The need was termed logical by Mr. Tager because of "the steady movement of worsted spinners to the South and the erection of most of the nation's synthetic fiber plants in that area. Charleston and Savannah are excellent and ideally located ports," he said,



PRESIDENT-ELECT DWIGHT EISENHOWER paid a visit to the Worth Street district in New York City prior to his election. He is pictured as his automobile passed the offices of Springs Mills, Inc.

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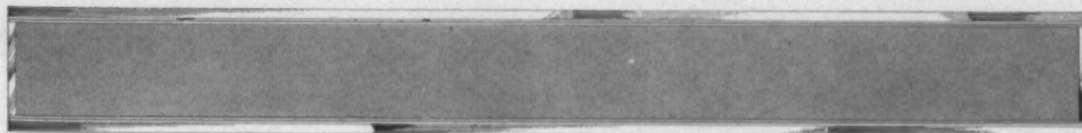
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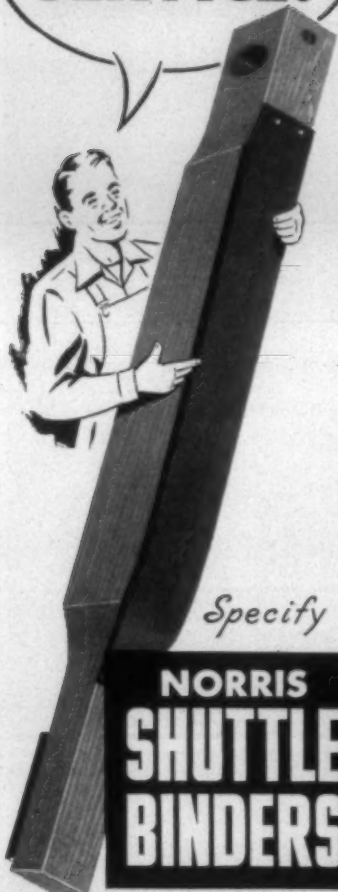
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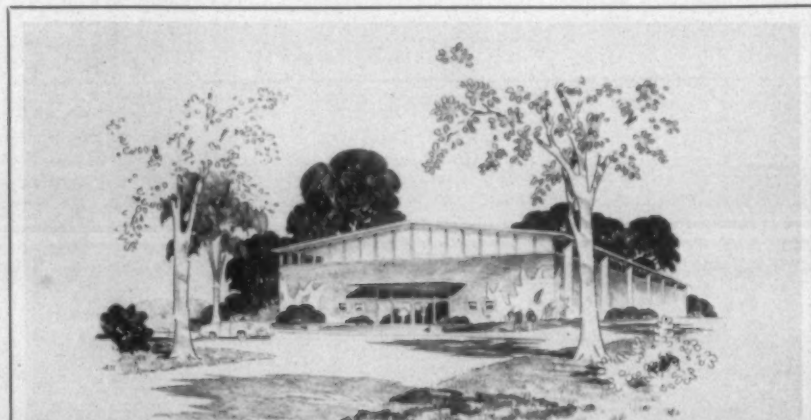
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### MILL NEWS

"and both these cities have completed surveys indicating that ideal facilities exist within their borders for modern combing plants. Further, both of these communities are anxious to co-operate in supplying capital, facilities, and labor for such a venture. Such a plant would make it possible to shave 20 to 35 per cent from freight costs for the Southern spinner." Associated's plant, which spins fine zephyr and synthetic yarns, is located at Gastonia, N. C. "At the present rate of movement of worsted mills to the Southeast," Mr. Tager estimated, "more than half the industry should be located there by 1956 and such combing facilities will become increasingly important." The company is conducting a survey of interest among those mills and communities which would participate in the project.

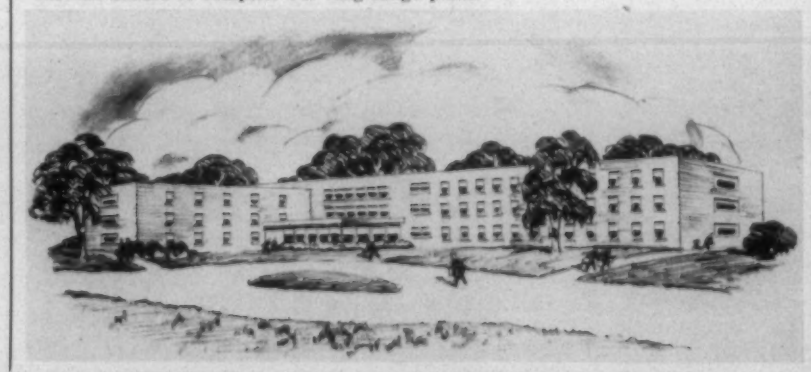
CHATTANOOGA, TENN.—In a transaction completed here Nov. 5 Burlington Mills acquired the stock of Peerless Woolen Mills, according to an announcement from J. C. Cowan, Jr., Burlington Mills president. The Peerless organization maintains headquarters at Rossville, Ga., a suburb of Chattanooga

and is engaged in the woolen and worsted business. It is a completely integrated organization operating in the automotive, blanket and apparel fields. Burlington Mills maintains executive headquarters at Greensboro, N. C. In connection with the announcement, Mr. Cowan said that the transaction broadens Burlington's base in the general textile field by placing the company in the wool field for the first time. "We are happy to have join in with us one of the oldest and one of the best wool manufacturing organizations and operations in America," Mr. Cowan added. "Peerless is a leading producer that has been, and is, highly successful. It will continue to operate with the same key personnel and under the same policies as to both production and sales." Mr. Cowan pointed out that the further diversification of Burlington in this field, and the acquisition of an outstanding and modern wool operation, is a logical step in keeping with the current development of many new wool-like man-made fibers that will be used in blends with wool to serve many of the fabric fields. He stated that this step was considered a vital one in the development of a rounded program for handling the newer man-made fibers. J. L. Hutcheson, Jr., president of Peerless, and



A FIVE MILLION-DOLLAR DEVELOPMENT CAMPAIGN FOR PHILADELPHIA TEXTILE INSTITUTE BUILDING AND ENDOWMENT FUNDS was launched Nov. 10 by the Philadelphia Textile Institute Foundation, according to Fred C. Scholler, president of the foundation. The comprehensive program includes a \$400,000 auditorium-gymnasium (above) and an \$800,000 dormitory for 150 students (below) to be built on the present P.T.I. site at School House Lane and Henry Avenue, Germantown, Pa.

Additional capital expenditures call for a new \$100,000 finishing department and \$500,000 for equipment and plant modernization. Administration and faculty needs, including a pension fund, will cost \$200,000. Endowment funds of \$3,000,000 or annual sustaining funds of \$100,000 a year, complete the development fund program. In announcing the campaign, Mr. Scholler stated, "In 1949, the Philadelphia Textile Institute moved to its new \$2,500,000 campus in Germantown and in line with the tremendous development of the college, this campaign represents the minimum amount needed to complete our long range plans."



Roy Anderson, treasurer and general manager, will continue in charge of the operation under the new set-up. Other key persons who will continue in management capacities include: S. Lewis Hutcheson, vice-president and sales manager; Jack Anderson, vice-president; C. G. McPhail, secretary; and J. L. Hutcheson, III, who has been serving Peerless as a plant manager. Peerless has its own selling organization in New York City, which organization will continue to operate under the present supervision of Mr. Lewis Hutcheson. Peerless is one of the largest single-unit woolen mill operations in the United States and was founded in 1906 by J. L. Hutcheson, Sr., who at age 84 is chairman of the board. Peerless grew and expanded over the years until today it consists of 450 looms and 80 sets of cards. It is a completely integrated operation from the purchase of raw wool to the delivery of finished goods. Its facilities are modern and have long enjoyed excellent labor relations. For 46 continuous years the company has operated on a full time basis, without interruption to that schedule.

GREENVILLE, S. C.—Employees of F. W. Poe Mfg. Co., a division of Ely & Walker Dry Goods Co., recently completed 2,058,404 man-hours of work without a lost-time accident. Supervisors and employees who served on the plant safety committee were feted at a dinner party. A certificate testifying to the safety record was presented to J. P. Jewell, a member of the safety committee, by M. E. Wilson of American Mutual Liability Insurance Co.

CHESTER, S. C.—Additional machinery costing more than \$1,000,000 has been ordered by Springs Cotton Mills for installation at the Gayle and Eureka plants in Chester and the Grace Bleachery, near Lancaster. Orders have been placed with Draper Corp., Saco-Lowell Shops, Whitin Machine Works and Morrison Machine Co. Auxiliary equipment will be purchased later. This will permit the company to offer several new lines of fabrics.

DURHAM, N. C.—Erwin Mills, Inc., recently announced plans for doubling the company's percale sheeting production by consolidating the No. 6 and No. 4 plants and the conversion of the No. 1 plant to the manufacture of percale. No decision has been announced on the disposition of the No. 6 mill site. Its 200 employees have been offered jobs in other Erwin plants.

WAYNESBORO, VA.—Employees of the local plant of Frank IX & Sons have been presented a special award by Liberty Mutual Insurance Co. for having completed 2,941,238 man-hours of work without a lost-time accident. The award was presented to William M. Bickley and Joel A. Fewell, plant superintendents.

GREENVILLE, S. C.—Judson Mills honored its veteran employees Nov. 6 at a banquet at the Poinsett Hotel, presenting service pins to 241. General Manager J. M. Bailey was toastmaster and presented awards along with Alfred G. New, superintendent.

After-dinner speaking is done mainly by men. Women can't wait that long.—Tallapoosa (Ga.) Herald.



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## Filling Mixing Looms

The multiple box fly shuttle looms synonymous with Crompton & Knowles Loom Works have been essentially called box looms; that is, they could weave two or more colors or kinds of filling automatically. They could also be used merely to mix one

kind of filling. These multiple box looms have had a special appeal to those mills whose fabrics require mixing filling on occasions and yet who desire looms which can be changed quickly and easily from 2x1 to 4x1 or 4x4.

Recognizing the need for a loom confined to filling mixing alone, Crompton &

Knowles have developed a new simplified loom especially for such weaving. Two looms 82-inch b.s. with a 76-inch warp spread have been operating for many months at a speed and efficiency sufficiently in excess of that of any comparable weaving machine, to make a good return on the investment, the company states. These new looms are available only as 2x1 box filling mixing, yet with several choices of construction. The loom frames are equipped with heavy cast iron "A" girts which tie the lengthwise members into a rigid structure. The harness or shedding motion may be a Knowles head, dobby, or a newly-designed end cam mechanism.

The driving and shipping motions have large diameter steel crank and bottom shafts with more than the usual number of bearings, which, combined with the frame, provide an exceptional amount of stability and rigidity. The clutch may be of the cork friction or the double plate friction type. The picking may be either batwing or cone. Several innovations are available on the center stop motion.

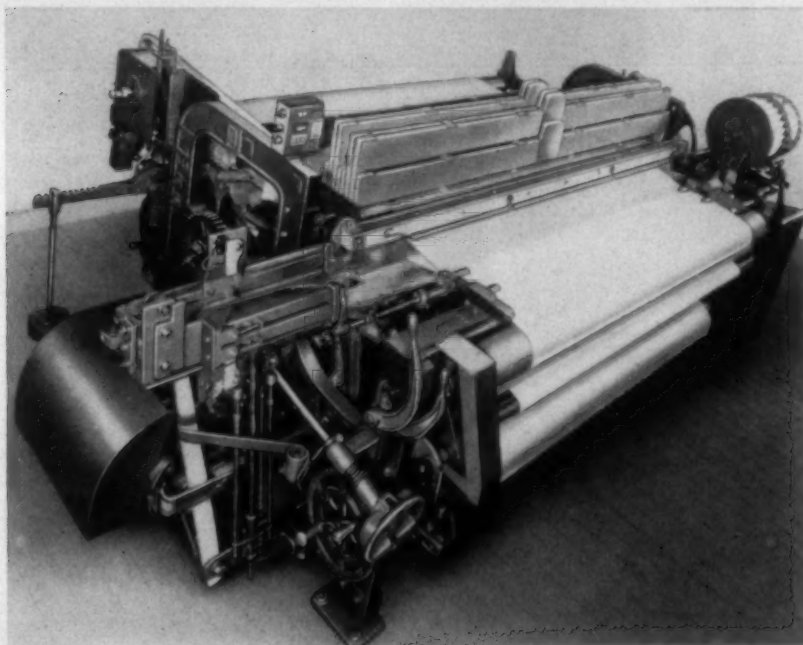
The lay is assembled on a heavy steel angle which runs throughout its entire length, thus supporting the outboard members, including the shuttle box, in a most rigid manner. Backstays with glass rods prevent damage to yarn. The two-cell shuttle box accommodates a shuttle 17½ inches long by 1 15/16 inches wide by 1½ inches high, for an 8¾-inch bobbin with a 1⅜-inch maximum wound diameter. The boxes are actuated either by a positive geared or cam motion.

A center fire picker with parallel motion, and back binder, is used on the magazine end and a new type of drop box picker on the drop box end. Newly-patented binders at both ends assist materially in proper checking and picking and contribute to increased speed and better quality of fabric.

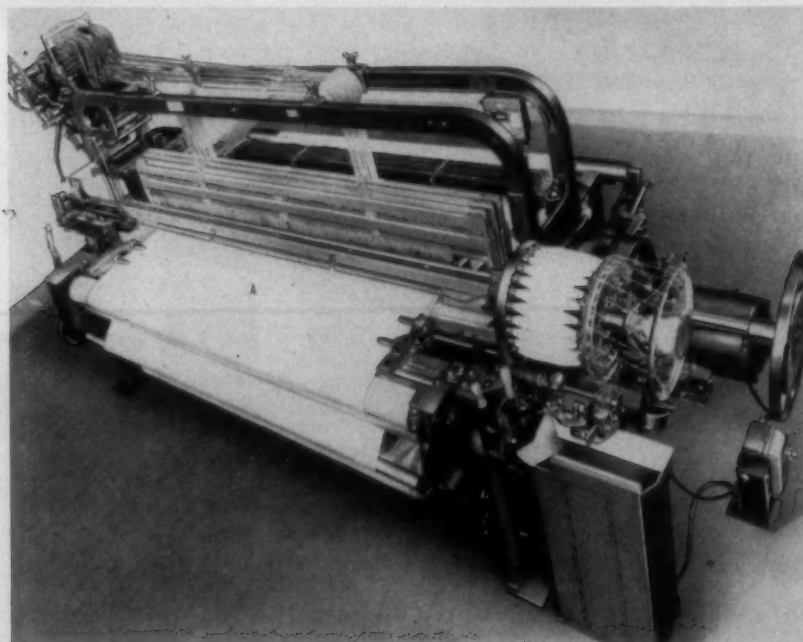
A new scissor-type thread cutter operates at the eye of the shuttle leaving a very short tail to pass into the bobbin can at transfer. A new type of thread cutting temple cuts the filling on the outgoing bobbin on the first pick and on the new bobbin on the second pick. These new cutters make filling drag-ins conspicuous by their absence. A rotary magazine by a cam on the bottom shaft has a capacity of 22 bobbins.

Two electro-mechanical feelers which do not require metal bobbin ferrules are employed at the box end. The protection is the conventional type with increased rigidity for higher speeds. There is a choice of several types of let-offs, depending upon the requirements. Beam diameters up to 32 inches may be accommodated.

The now famous all-purpose take-up is recommended. This take-up bites close to the fell without slippage and thus without damage to tender yarns, yet with ample



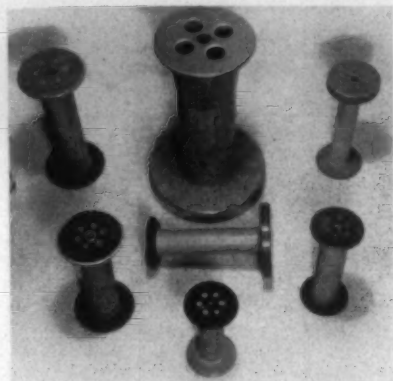
The new Crompton & Knowles side cam loom (above), and the new C. & K. head motion loom (below).





gripping power for the heaviest of fabrics. Other types may be furnished on special order. Removable cloth rolls are standard. Electric warp stop motions of two, four, six, and eight banks with new safety signals not only stop the loom at a predetermined position and insure against ends out but assist the weaver in locating broken ends and eliminate arcing and thus danger of fire and of shock to the operator. (L-1)

### Lantuck Supporting Material



A relatively new non-woven supporting material just adopted as standard for all plastic-laminated textile bobbin heads produced by Synthane Corp. is the random cotton fibre mat known as Lantuck, developed by Wellington Sears Co. and West Point Mfg. Co. In making the announcement, D. Roland, general manager of Synthane Corp., gave several reasons for Synthane's adoption of the new material for Synthane grade L-RF laminates. Even before comparative strength tests of Lantuck-supported laminates, he said, Synthane found that Lantuck-supported plastic machine-finishes as well as or better than other laminates and that nicks or scratches can be removed from it easily by sanding. Most decisive proof of the superiority of Lantuck over other supporting materials, however, he said, were laboratory tests of Lantuck-laminated bobbin heads in comparison with other Synthane bobbin heads supported by paper, linen, or combination paper-and-canvas but otherwise identical.

In the impact-fatigue test, Mr. Roland explained, the Lantuck-supported heads withstood almost twice (1.9 times) as many blows before failure as did the second strongest head supported by paper-and-canvas, 13 times as many as the linen-supported head, and 68 times as many blows as the paper-supported heads. Detailed findings of the impact strength tests, conducted by the research division of West Point Mfg. Co., are available for study by interested persons upon request to this magazine. (L-2)

### Dynalog CycleLog Controller

Complete electronic instrumentation for the control of time and temperature schedules in batch dyeing operations is now available in a single instrument, the Dynalog CycleLog controller, product of the Foxboro Co. The new instrument, incorporating all the automatic features of the Model 40 (pneumatic) CycleLog controller, introduced in 1949, employs the Dynalog (electronic) measuring system, noted for its

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(November, 1952)

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## FOR THE TEXTILE INDUSTRY'S USE—

speed of response, flexibility and maintenance simplicity. Ideally suited to the Cycle-Log controller, the Dynalog measuring system, installed with inexpensive, standard, three-conductor lead wire, permits locating the instrument up to 1,000 feet away from the dye kettle. Temperature range changes are quickly made in the field by simply exchanging range coils and rate-of-rise dial, thus adapting the time-temperature schedule to high pressure dyeing, required for the new synthetic fibers.

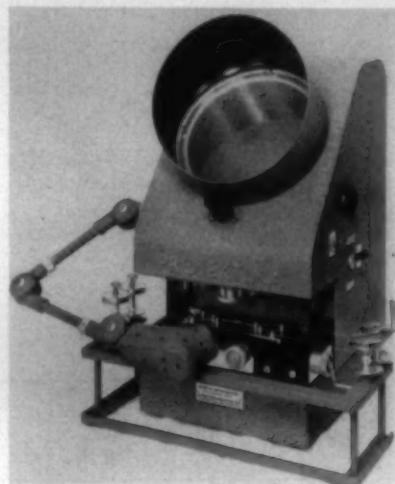
The operator can set up an automatic dyeing cycle in less than ten seconds, making all control adjustments from the front of the instrument case where the setting knobs, operating buttons and signal lights are mounted. There is no cam mechanism. By pressing the power button, setting the knobs for base starting temperature, rate of temperature rise, dyeing temperature, dyeing time and then pressing the start button, a complete dyeing schedule is set in motion. Controlled by the Dynalog CycleLog controller, the water is heated to a base starting temperature and held there for a desired period of time (from four to 27 minutes) while dye and heat are uniformly distributed. At the end of this period, an amber light on the controller shows that the rate of dye-bath temperature rise is being maintained, from one-half degree to 7° per minute, depending upon the rate-of-rise setting. When the pre-set dyeing temperature is reached, as signaled by a green light, the controller holds that temperature for the

pre-set dyeing period (up to three hours).

At the completion of the hold time, the controller shuts off the steam and a red light signals the end of the cycle. However, if additional dyeing time is desired, the operator merely presses the overtime button, re-opening the steam valve for four to 27 minutes of extra processing time at the pre-set dyeing temperature. Operational features of the Dynalog CycleLog controller are described in a new Application Engineering Data Sheet, 220-43, copies of which will be sent on request.

Bulletin 447, just issued by the Foxboro Co., contains complete details of temperature recorder construction, showing how each component part, from bulb to chart, contributes to recorder accuracy. Its 20 pages provide factual information, assisting in the understanding, selection and use of temperature measuring instruments. An entire section is devoted to selecting the correct thermal systems for temperature measurement applications. Characteristics of vapor pressure, gas pressure and liquid expansion systems are explained in three pages of text and unique reference charts. Illustrations include more than 50 photographs, charts and diagrams. Actual installations are pictured, design features checked, thermal systems charted, and complete descriptions provided for rectangular and circular case instruments, temperature bulbs, charts and accessories. A brief description of indicating and controlling temperature instruments is also included in the new publication, copies of which will be sent on request. (L-3)

## Projectina



Projectina, a new Swiss optical instrument for counting the number of threads per inch and for testing, measuring and observing textiles, yarns, fibers and samples is announced by the Sjostrom Machine Co., exclusive distributors for United States and Canada. This unit, standing 24 inches high with a 12-inch square base and weighing 40 pounds, is equipped with a series of flood lamps, lenses, mirrors, etc. The object to be observed is placed on a stage-plate which can be adjusted forward, backward, sideways or tilted. It is then blown up on an eight-inch diameter ground glass screen from three to 20 times. The Projectina is so arranged that samples can be observed on the surface, or in transparency or in a combination of both, giving a three dimensional view in natural colors. Finely spaced lines on the screen permit actual measurement of fibers, yarns or threads, in either fractions of an inch or in millimeters. The ground glass screen is instantly removable and replaced with an eye-piece disc which allows magnifications of 50, 100 or 400 times with no further focusing or adjustment. (L-4)

## New Eastman Dye

A new, bright red acetate dye, Eastone Brilliant Fast Red 2B-GLF, will be offered soon to acetate textile finishers by Tennessee Eastman Co. The dye is said to possess a combination of fastness properties and dyeing characteristics unequaled by any acetate red dye now on the market. In making this announcement, Henry L. Ford, assistant vice-president of the company, stated, "Tests in our development laboratories and evaluations in the field failed to disclose a single weak spot in the over-all characteristics of this new red dye. The cost of manufacture is sufficiently low so that we will be able to offer our customers greater money value than any other fast red or pink acetate dye."

"An analysis of the properties of Eastone Brilliant Fast Red 2B-GLF shows its resistance to atmospheric gas and light fading to be equal to or better than any other acetate red or pink available. No staining results during standard tests for sublimation, perspiration, hot pressing (wet or dry) or dry cleaning and its resistance to wet and dry crocking are excellent. The new dye is insensitive to mild alkali and is unaffected by

# The Textile Shops

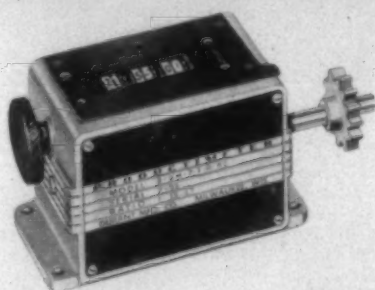
Acid Tanks	Coppersmithing	Picker Screens
Ball Bearing Journal Assemblies for Slashers and Dry Cans	Cowl Ventilators	Perforated Metal
Bleaching Tanks and Tubs	Cylinders	English Wire Cloth
Card Screens	Spinning	Galvanized Wire
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Card Screen Lickerins for Cotton and Rayon	Drip Pans	Rolls of All Types and Sizes
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Condensers	Dry Cans	Tanks
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urea formaldehyde finishing agents. It is highly dispersed and has excellent levelling and exhaustion characteristics in either box or jig at temperatures of from 150° F. to 190° F."

Eastone Brilliant Fast Red 2B-GLF will be included in the Eastman GLF or Estroñ dye series which is currently being promoted for use in those applications requiring maximum resistance to gas and light. Tennessee Eastman recommends the use of its new dye for plain dyeing and discharge, screen or application printing. Detailed information about Eastone Brilliant Fast Red 2B-GLF is available upon request. (L-5)

## New Durant Doffmeter



Of special interest to the textile industry is the Durant Doffmeter, the latest development in the Productimeter line of counting and measuring machines. The Durant Doffmeter, designed for loom application, is a predetermined type unit for measuring yardage of cloth woven. It will stop the loom, or signal the operator when the predetermined setting is reached. It eliminates costly over-runs, and assures uniform lengths of cloth at maximum production, the company states. The Durant Doffmeter, Model 3-DM-7-1, is small, compact, and durable—entirely enclosed for protection against dust and moisture—designed in a modern straight-line motif in attractive tones of silver gray and seal brown. Over-all dimensions are: 5¾ inches wide by 2½ inches deep by 2½ inches high. Weight is 1¾ pounds. The cover is metal hinged, providing quick access to the predetermined number wheels, which are easily set by thumb.

Doffmeters are available for clockwise or anti-clockwise rotation and for right or left-hand drive. Measurement is in yards on three visible wheels, with a hidden wheel measuring one-tenth yards. Switch capacity is 30 amps at 24 volts. The unit can be furnished with a direct switch connection to carry 15 amps at 115-volt A. C. Durant Doffmeters can be driven either by a gear meshing with the gear of the sand roll, or intermediate gear; also by a forked coupling. Four mounting holes are provided for convenient mounting to a bracket or plate.

In addition to the three-figure Doffmeter, this counter design is available with five figures and designated as SP Predetermined Counters. In either stroke or rotary type, they are applicable for general mill operations such as spinning, drawing, pin drafting, warping, beaming and roving. The predetermined count may be set for any figure up to 99,999. SP Predetermined Counters have the same rugged construction features as Doffmeters and can be supplied for either

AC or CL rotation, right or left-hand drive, for normally open or normally closed circuits. Complete description, specifications and dimensional data are contained in Bulletin No. 501, available on request. (L-6)

## Sales Training Booklet

An innovation in retail sales education has been introduced by Geigy Co., Inc., maker of Mitin, the durable mothproofing, with publication of a retail sales training booklet giving a simple and factual presentation of the selling features of woolen merchandise. The booklet is designed to meet the need for information at the retail level, where new scientific developments in textile fabrics and finishes occur so frequently that the sales person is left with an impossible task of keeping up-to-date.

As producers of a component, or accessory product not sold directly to the consumer, Geigy is offering expert information about its product, Mitin, for sales personnel handling merchandise with which the Mitin tag is identified. It is believed this sort of training material is unprecedented. "Our experience in marketing Mitin durable mothproofing has shown us that we must supply the sales person with more details than a hang tag can carry," reported C. W. Mahnken, director of product development for Geigy's dyestuff division. "Since the consumer is hardly able to memorize the genuine properties which have made a particular type of finish the sales feature that was intended, it is obvious that the sales

person on the retail floor holds the manufacturer's fate in his hands."

The Geigy booklet gives the salesman of woolen merchandise a helpful review of what wool means, and describes the performance properties as well as the weaknesses of animal-fibred fabrics.

Particular emphasis of course is given to discussion of moth damage and mothproofing, contrasting the expense, labor, and uncertainty of traditional home-applied remedies with the convenience of mill-applied durable mothproofing. (L-7)

## New Becco Bulletin

A new bulletin brought out by the Buffalo Electro-Chemical Co., Inc., contains a wealth of information on bleaching acetate and nylon with peracetic acid. These fibers present certain difficulties when the customary bleaching agents and procedures are used. With acetate there is the danger of saponification which interferes with the subsequent dyeing and making of fused shirt collars. With nylon, customary bleaching agents do not produce an acceptable white. Peracetic acid overcomes these difficulties, it is claimed. Carefully developed bleaching procedures carried out on standard bleach house equipment produce excellent whites. The valuable properties of acetate are fully preserved and heat-set nylon is fully bleached. These fibers may be bleached as such or in mixtures with cotton or viscose rayon, because peracetic acid will produce a full white on them all. If cotton is present, more

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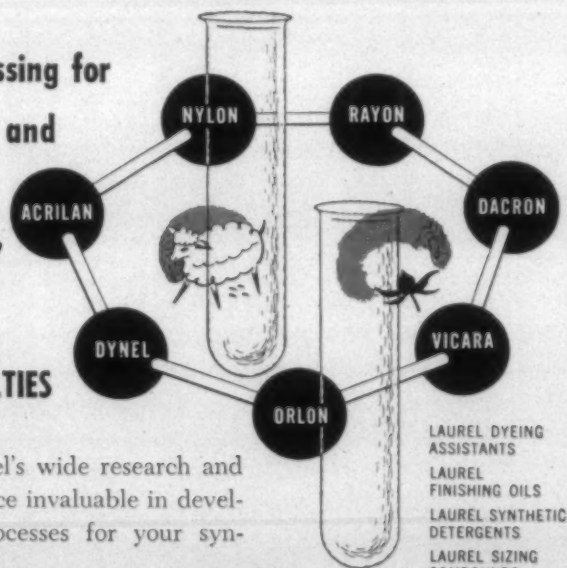
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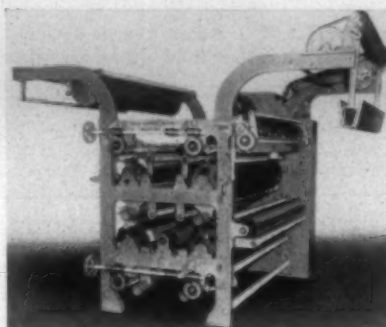
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### FOR THE TEXTILE INDUSTRY'S USE—

removal is accomplished as well. Becco's new bulletin contains not only general information on this novel bleaching process, but also seven detailed process descriptions. These are based on actual, proved mill practice and contain data on bleach formula, bath make-up, equipment and procedure. Bulletin No. 44 may be obtained on request to this magazine. (L-8)

### Gessner Steam Brush



A new four-cylinder steam brush has been developed by the David Gessner Co., designed especially for fabrics which must be cleared out and softened. The two 16-inch brushing cylinders, clothed with nylon bristles, and the two front brushes with a combination of nylon bristles and sandpaper slats are accurately balanced to withstand high speed. Positive, fully encased, chain drive on these cylinders eliminates both belt slapping and all slippage. Centralized lubrication greatly reduces maintenance time of this all ball-bearing steam brush. Dust collectors are installed under each of the brushing cylinders including the spiral, nylon bristle back brush. With the steam pot located overhead, no steam blows on the machine. Automatic brakes completely halt coasting. A variable speed drive, from 35 to 80 yards per minute, which is optional equipment, plus independently adjustable contact rolls facilitate brush adjustments according to different brushing requirements. By noting the indicator readings on these contact adjusters, certain brushing and sanding effects can be duplicated at any time. (L-9)

### Potter Alarm System

The Potter Max-Alarm system is designed as a safety or warning device for processes or equipment where the flow through a pipeline is not to exceed a given value. With a built-in relay having a capacity of eight amperes at 125 volts, it can be used to operate a visual or audible warning signal and also to shut off a pump or close a motorized valve when the maximum limit is exceeded. Potter Aeronautical Co., the manufacturer, states that the flow sensing unit used with the system is unaffected by pressure variations in the measured fluid; can be used at pressures up to 20,000 psi and at temperatures from four degrees Absolute to 1,200° F. The system can be used with toxic or highly corrosive liquids, viscous fluids, liquified gases and many other hard-to-handle liquids. A signal light on the panel

indicates when the power switch is on and the instrument is operating, while a second light flashes on only when the flow rate has exceeded the maximum value. The system includes a reset button for turning off the warning light and resetting the alarm relay after the necessary corrective action has been taken. (L-10)

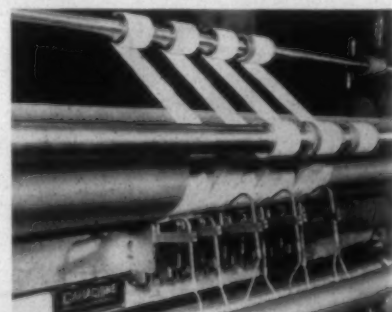
### Handling Handbook

The Caster and Floor Truck Manufacturers Association, made up of the principal manufacturers of industrial wheels, casters, hand and floor trucks and other basic materials handling equipment, have just announced publication of a new *Handbook of Manual Materials Handling Equipment*. The handbook, recognized as the definitive text in this field, is designed to acquaint both industry and the layman with the terminology and basic fundamentals of casters, wheels, hand and floor trucks, pallets and skids. According to the association, anyone reading the handbook can accumulate an intelligent working knowledge of all types of manual materials handling equipment, and by applying the principles outlined in the text, industries and institutions, warehouses, stores and other commercial establishments as well as government agencies can effect considerable cost savings in the movement of materials. The handbook sells for \$1 and is available to associations, user societies and institutions at quantity discounts. (L-11)

### G-E Bulletin Available

A new bulletin describing multi-motor packaged slasher drives for the textile industry has been announced as available by the General Electric Co. The illustrated, four-page bulletin, designated as GEA-5711, covers design and performance features of the G-E packaged slasher drive with amplidyne tension control. Maintenance factors and the G-E adjustable-voltage speed variator power unit are also outlined. (L-12)

### Calrod Tubular Heaters



The problem of edge-fraying when cutting acetate rayon into strips has been eliminated by the Cameron Machine Co. through the use of General Electric Calrod tubular heaters on the cutting knives of a recently announced slitting machine. The straight, electrically heated blades of the new machine melt razor-thin slits in the rayon as the fabric passes between the blades and the rewinder platen roll. While cutting, the blades fuse minute strips along the edges of the cuts to prevent separation or beading. The edges cool instantly, according to Cam-

ron engineers, and there is no danger of fused layers in the rewind rolls. Slitter units operate efficiently at speeds up to 250 feet per minute and can be set to slit to any width from one-quarter inch up, across the full width of the material, the engineers said. (L-13)

### Black Light Unit



Cooper Hewitt Electric Co. announces the development of a new and powerful black light unit in the 3,660 angstrom range. A quartz high pressure mercury arc tube in a sealed beam is utilized to furnish the desired wavelength. Visible light is eliminated by a Corning filter, which transmits only the bands in the region of 3,660 angstroms. The Cooper Hewitt 3,660° black light unit can be supplied for flood or spot focus and the swivel arm allows settings and adjustments of the lamp in practically all directions and positions. The Cooper Hewitt 3,660° black light unit is valuable in revealing faults in raw materials and processed work, distinguishing types of fabrics, detecting faults in dyeing, matching lingerie shades, examining weakening of shade in washing or dyed textiles and revealing oil stains, the company claims. (L-14)

### Industrial Luminaire

An industrial luminaire, type SDP, which provides more comfortable seeing conditions by means of an upward component is now available from the Westinghouse Electric Corp. It uses two slimline lamps of 38, 58, or 75-watts each. The upward component, which distributes 23 per cent of the light towards the ceiling, eliminates the severe contrast between bright luminaires and dark ceiling. Also, the use of soft colors to produce better eye-comfort has been greatly aided, the company states.

Styled for heavy industrial use, the luminaire provides the upward component by slots located over the lamps on each side of the reflector. The all-white hood is heavily ribbed and consequently has lost none of its strength due to the introduction of the slots. The porcelain enamel reflecting surface is one piece and is easily removable for cleaning. It uses the new lead-lag slimline ballast. Back to back lamp spacing is provided, and adjustable slide action hang-

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Eagle & Phenix Division of Fairforest Company at Columbus, Ga. shows one of two 400 GPH Gaulin Homogenizers now making a finer, perfectly uniform size at lower cost.

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ers are available. Also available is a longitudinal shield to provide 27° shielding. The luminaire is expected to find its greatest application in general industrial use. (L-15)

### Industrial Fan Booklet

Eleven sizes of new industrial fans and their standard wheels are fully described in a new 12-page booklet, SA-6873, available from the Westinghouse Electric Corp.'s Sturtevant Division. The colorful booklet deals with fans which range in size from 670 to 44,000 cfm at pressures up to 16-inches mercury. In addition to presenting a table of condensed specifications on performance and dimensions, the booklet discusses each of the three available wheel types—air handling, material handling, and long shavings—and gives typical applications for each. Also, arrangements in which the fans may be obtained are shown and described. Accessories available and special features are also pointed out and fully discussed. To aid in the selection of a fan for high temperature applications, a table of maximum operating r.p.m.'s for various sizes and operating temperatures is presented. (L-16)

### Stand-Up Fork Truck

An electric "stand-up" fork truck, the Stoway, which can operate within its own length, has just been announced by the Clark Equipment Co. as the newest addition to its line of materials handling equipment. The Stoway is designed for warehousing and freight terminals where close quarters and narrow aisles demand high maneuverability and where the driver must continually mount and dismount. It has a capacity of 2,000 pounds at 24 inches, 2,500 pounds at 15 inches, and 1,650 pounds at 30 inches.

Driver comfort, easy off-and-on access, convenience of controls and excellent visibility are features claimed for the new Stoway. Acceleration and direction of travel are controlled through forward or backward movement of a single lever. Lift and tilt controls are grouped to the right of the acceleration-travel-control lever to simplify hand movements. The rubber-cushioned floor board contributes to driver comfort.

The Stoway features two methods of braking. Heavy-duty hydraulic service brakes on the drive wheels serve regular and parking-brake operations. "Deadman" or parking brakes go into action when the driver dismounts or removes his foot from the brake pedal. Positive-control reverse "torque-braking," which occurs when the travel control lever is reversed, is employed in the Stoway, and in all other new Clark electric battery-powered trucks. The drive and pump motors are completely enclosed against corrosion, condensation or foreign particles. The drive motor is mounted directly to the drive axle, thus eliminating all connecting components such as shafts, chains and sprockets. The automatic acceleration system has a pre-set time delay between each point of power. It is impossible either to overload the motor by fast shifting or by simultaneously applying both forward and reverse power.

All vital components of the Stoway are

readily accessible for inspection and service. Motor bearings are sealed-in to eliminate lubrication problems. Plug and receptacle are conveniently mounted. The battery compartment cover is hinged for quick access. All lubrication points are within easy reach. Many of the component parts of the Stoway are interchangeable with Clark's seated-driver Clipper fork truck model.

The 60-inch radius and 360° steering allows the truck to operate within its own length. Travel speed is 6.5 m.p.h. empty, 6 m.p.h. loaded, with four speeds forward or reverse. A low center of gravity and dual steer wheels provide stability, while independent action of the dual steer wheels prevents excessive tire wear. Traction on uneven surfaces is assured by a three-point suspension system, and underclearance at center is a generous 4½ inches.

Rolled steel, telescopic uprights are available in sizes ranging from 72 inches to 132 inches maximum fork height. The standard upright for the Stoway has 94-inch maximum fork height. Hi-Lo-Stack uprights with 47½ to 64 inches of "free lift" with no increase in over-all upright height are optional at extra cost. An 18° tilt range—four degrees forward and 14 degrees backward provides a greater than normal tilting range. The Stoway is not available at present for the export market. Detailed descriptive literature on the Stoway is available. (L-17)

### Foxboro Bulletin

Copies of a new bulletin covering instrumentation for the Marhen process of controlled vat dyeing are available on request from the Foxboro Co., manufacturer of industrial instruments for measurement and control. Bulletin 468, compiled in co-operation with General Dyestuff Corp., provides a reference source of practical application data in the use of oxidation-reduction potential measurement for improving quality and uniformity of batch or continuous vat dyeing. One section describes the Foxboro Dynalog Redox recorder (key instrument in the process), its component parts and specifications, stressing the unique advantage of direct, continuous measurement from dye bath to instrument, with no pre-amplification equipment necessary. The bulletin lists 30 modern dyehouses where the Redox recorder is in use to obtain a continuous millivolt record of dye bath reduction potential. The 12 pages of text discuss the reduction theory, the measuring system, and further application possibilities. A brief history of the Marhen development is presented; further chemical reactions examined; typical user results listed. Four pages, with installation photographs and diagrams, are devoted to the measurement of dye bath potential and its use in jig dyeing, package (or beam) dyeing, and continuous vat dyeing. (L-18)

### New Reliance Booklet

Engineered motor-generator sets for all industries form the subject of a new, four-page, illustrated bulletin (F-2502) just issued by the Reliance Electric & Engineering Co. Briefly described is the complete line of "custom-tailored" M-G sets, shunt or compound wound, from three-quarters to

1,000-kw, built by Reliance to provide power for constant-voltage or adjustable-voltage systems and engineered to include synchronous or induction motors. Also included are six typical applications of Reliance M-G sets showing their utilization for large single-motor drives, excitation of synchronous machinery, multi-driven drives, and "spot conversion," an economical means of supplying D-C power at the point of use. Copies of this interesting, informative bulletin are available on request. (L-19)

### General Dyestuff Brochure

General Dyestuff Corp. has published a brochure describing the properties and uses of its line of Heliogen colors. The booklet gives full information on the powder brands, paste and presscake brands, water-dispersible powder brands and water-dispersible paste brands of Heliogen colors. The Heliogens are for use in enamels, flushing in oils, lacquers, lakes, paints and lacquers, paper, plastics, printing inks, roof granules, rubber, and textile printing. A free copy of "Heliogen Colors" may be obtained on request. (L-20)

### Abbeon Bulletin

Abbeon Supply Co. has made available to the industry its new Winter 1952-53 bulletin, "A Few Facts About Humidification." Some subjects covered in the bulletin are: "What is Meant by Relative Humidity;" "What Problems are Associated with Low Humidities;" and "How to Overcome Low Humidity." In addition, it describes the firm's various models of industrial humidifiers, humidity indicating instruments, and home and office humidifiers. Copies of this bulletin may be obtained on request to this magazine. (L-21)

### Remington Rand Booklet

Emphasizing the importance of the purchasing department and its place in the top ranks of management planning, a new booklet by Remington Rand, Inc., "Purchasing Procedures to Save Time and Money," outlines several time and money saving procedures for fast, precision purchase action. A feature of the book is a check list which gives the purchasing department a capsule survey of the important information needed for efficient operation. Checked answers point up the need for improving records and simplifying procedures. Effective methods for processing requisitions, procuring bids, placing orders and the follow up of purchase orders are outlined and case histories based on actual installations are reviewed. Following the theme of time and dollar savings in purchasing procedures a section is devoted to reproduction of forms which give better purchasing records, produced in less time, at a lower net cost. A newly developed traveling requisition is pictured and explained emphasizing the importance of how planned inventory control permits efficient purchasing. A flow chart compares the merits of this traveling requisition and the usually used requisition form and illustrates the reduction of paper work and simplification of routines. This booklet, known as X-1202, can be obtained on request. (L-22)



# Serving The Textile Industry

## Making Warper Beams

U S Bobbin & Shuttle Co., Lawrence, Mass., has begun production of warper beams in a new department that currently has a capacity of 200 beams a week, according to Lewis C. Briggs, III, sales manager. The manufacture of warper beams is a new venture for U S Bobbin and is supervised by James E. Oliver, warper beam engineer who was formerly with Allen Beam Co., New Bedford, Mass.

A new technique for the manufacture of beams for cotton and synthetics has been developed, said Mr. Briggs. The new manufacturing techniques call for the use of special machine tools, including a multiple borer. The beams are so built that they are four-ply construction and cross-laminated at a 90° angle.

New materials include aluminum inside supports for all beams and the beams for synthetics, including high tenacity rayon tire cord, are equipped with a Cordura plate designed by E. I. du Pont de Nemours & Co., Inc., Wilmington, Del. The design of this plate, it was explained, permits the accommodation of the great tensions built up on a warper beam by synthetic yarns. Similarly, special end-pieces have been developed for the cotton warpers in order to withstand the yarn pressure.

## Loom Firm Moves

Emil V. Wilson, Inc., textile consultants and loom rebuilders of 1210 New Buncombe Road, on the outskirts of Greenville, S. C., recently announced plans to move its operations to space in the building formerly occupied by Steel Heddle Mfg. Co. on East McBee Street in Greenville. The firm deals primarily in loom rebuilding and at present has contracts in a number of American mills along with others in Central and South America.

## Southern Dyestuff Expanding

Southern Dyestuff Corp. has begun a \$250,000 expansion program at its plant at Sodyeco on the Mount Holly Road near Charlotte, N. C., and has made several promotions and personnel additions in conformity with its growing business in dyestuffs and allied chemicals, John L. Crist, founder of the company, announced.

The building program will consist of two factory buildings, one a one-story structure and the other two stories, and a research and development center, which will be a one-story fireproof building. The company hopes to have these buildings completed early in 1953. It will add approximately 50 employees when this additional space is in use. The company has also purchased several hundred acres on the Catawba River near its plant for use as factory sites in the

future. The property is on the Piedmont & Northern Railroad.

Mr. Crist, who has been president and treasurer since he established the firm in 1936, becomes chairman of the board and treasurer under the personnel changes, which became effective recently. Leland G. Atkins, co-founder with Mr. Crist and vice-president since the beginning of the company, has been promoted to the presidency, and John L. Crist, Jr., has been named vice-president and sales manager. Dr. Raphael E. Rupp and Feaster V. Tribble have joined the Sodyeco sales organization as director of sales service and manager of sales service, printing, respectively. Dr. Rupp, a Ph.D. in chemistry of Yale University, has been technical superintendent for Pacific Mills in recent years and is well known in the textile and dyestuff industry. For a number of years he has been a directing officer in the American Association of Textile Chemists and Colorists. He is now a national councilor of this association. Mr. Tribble is a graduate of Clemson College and has held important positions in the textile industry and in dyestuff sales and application work.

The company produces a wide range of dyestuffs for textile dyeing and printing and continues to expand its research, development, production and sales service facilities, Mr. Crist explained. It has been conducting a steady expansion program since it began and is more than 20 times as large as it was in the beginning in sales and buildings and almost that much larger in the number of persons employed.

## New Clark Dealer

In its constant effort to improve customer sales and service, the industrial truck division of Clark Equipment Co. announces the appointment of a new authorized dealer in the state of South Carolina. The new Clark dealer is Lukas Equipment Co., 1804 Bland Street, Columbia, S. C.

## Trucker Personnel Changes

Of interest to traffic managers and shipping department personnel in the textile industry is the following announcement by Johnson Motor Lines, Inc., Charlotte, N. C., of a sales personnel expansion program with the following promotions and appointments:

Charles H. Lucas, traffic representative of Pawtucket, R. I., transferred to Boston, Mass., and promoted to district sales representative. O. R. Harrell, traffic representative, High Point, N. C., promoted to district sales representative. J. C. Gorman has been appointed traffic representative in Boston, Mass., and R. L. Healey replaces Mr. Lucas as traffic representative in the Pawtucket terminal area.

In New York, Marty Hirsch and Gasper

Forest are additions to the textile sales staff as traffic representatives. Frank Monaghan was appointed traffic representative at Hawthorne, N. J., replacing E. T. Gass, transferred to the Avenel, N. J., terminal area. R. P. Wallace was appointed traffic representative at Philadelphia, Pa., covering part of Philadelphia and the western Pennsylvania area. J. L. Boyles has been added to the sales force as traffic representative covering the Greensboro and Winston-Salem, N. C., areas. F. C. Rhyme was promoted from assistant terminal manager at Clearwater, S. C., to traffic representative in the Columbia, S. C., terminal area. J. N. Johnson, Jr., was appointed traffic representative in the Wallace-Cheraw, S. C., terminal area. In addition to covering the Augusta, Ga., area, G. H. Martin, traffic representative, will also cover the area served by the Charleston, S. C., terminal, Johnson Motor Lines' most recent terminal addition.

The additions to the sales personnel result in 35 sales representatives covering the area from Atlanta, Ga., to Boston, Mass. Johnson Motor Lines, Inc., beginning in 1945 with 41 employees and 31 units, now serves more than 5,700 communities in 11 states along the Eastern seaboard, and have grown to 725 employees with 602 units, which travel more than 21,000,000 miles annually.

## Industrial Rubber Hose

Republic Rubber Division of Lee Rubber & Tire Corp., Youngstown 1, Ohio, is now producing a special type of flexible, high-pressure industrial rubber hose called Republic Wiretex. The hose, being manufactured in a newly-completed, multi-million dollar plant, has unusual characteristics of strength, flexibility, oil and abrasion resistance, plus an ability to satisfactorily withstand effects of both high and low temperatures.

Republic Wiretex hose is made with a mandrel cured, Reprane tube in lengths up to and including 60 feet. The tube is reinforced with a specially selected textile carcass which is continuously braided around the tube in multiple rubber-impregnated plies, or with alternating plies of braided fabrics and braided plies of wire, or with multiple braids of standard or extra heavy wire only. The hose carcasses are encased in either abrasion resistant, thick rubber covers or covers made of braided textiles. Republic Wiretex hose is designed to carry various types of gases or fluids under both high and low pressures. The hose is not weakened by constant vibration or flexing and it will not rust or corrode.

Republic Wiretex hose is built to exceedingly close dimensional tolerances and is so constructed that internal pressure surges do not effect the measured flow volumes of the hose. Republic Wiretex hose is built

## SERVING THE TEXTILE INDUSTRY—

to withstand working pressures as high as 5,500 p.s.i. and temperatures from minus 40° F. to plus 200° F. Standard sizes range from 1/8ths to two inches for hydraulic control hose. Republic Wiretex is also designed to meet high temperature and high pressure requirements for steam, air, ammonia and other types of industrial end usage.

### Holt Named Agent

Glenwood Machinery Associates, Inc., 384 Glenwood Avenue, East Orange, N. J., announces the appointment of R. E. L. Holt, Jr., and Associates of the Jefferson Building, Greensboro, N. C., as their representative in the states of Virginia, North Carolina, South Carolina and Tennessee. Glenwood introduced its new automatic quill polisher and degreaser for the first time at the 17th Southern Textile Exposition and is pleased with the interest which it received.

### Billington Ceases Operations

The Billington Co., manufacturer of bobbins and shuttles for the textile trade for over 100 years, is now retiring from business. The firm had been in continuous operation since 1848. The company's plant at 1524-28 North 5th Street, Philadelphia, Pa., has been sold to the Penn Supply & Metal Co. for \$120,000.

### Fiber Testing Laboratory

W. M. Hall & Sons, Belmont, N. C., recently announced establishment of a cotton fiber testing laboratory, the first such commercial venture in Gaston County, "the spindle center of the world." While several mills in the county have such laboratories for their individual use, the Hall laboratory is the first to be initiated as a business in itself to solicit the business of merchants, brokers and manufacturers. W. M. Hall, Jr., is in charge of the laboratory and he is assisted by Mrs. Leah B. Eller and Mrs. Betty Lineberger Warren. Mr. Hall and Mrs. Eller have successfully completed a course given by the American Cotton Manufacturers Institute at Clemson (S. C.) College in the operation of the machines and methods of calculation.

### New Carbon Bisulphide Plant

The Stauffer Chemical Co. announces the completion of a new carbon bisulphide plant at Le Moyne, Ala., about 22 miles north of Mobile. Construction was started last May and the plant is scheduled to be in operation the first of the year. Of sufficient capacity to supply the growing demand for this product in the Gulf Coast area, this is the ninth new chemical plant built by Stauffer since World War II. The new Courtaulds rayon plant will be a principal customer. The plant design incorporates the most modern and efficient devices for the control of air and water pollution.

### Synthane Plant Addition

Synthane Corp., manufacturer and fabricator of laminated plastics for industry, has added a two-story brick wing to its plant at Oaks, Pa. The 150 by 60-foot structure provides an additional 18,000 square feet of floor space and marks the eleventh major plant expansion since the original factory was built in 1929. A major portion of the main floor houses the company's textile products division, producing laminated bobbins and other textile production equipment. The small-lathe department has also been moved to Oaks, Pa. An enlarged stockroom is located in the basement. Consolidation of Synthane's textile products division in the new wing has created additional expansion area for the shipping and tube finishing departments. Transferring the small lathes department has also provided increased facilities for the milling department which has been enlarged by the addition of new milling equipment.


### New Du Pont Laboratory

Preparation of the site for Du Pont's new \$5,000,000 textile research laboratory at Wilmington, Del., will begin some time in December, but actual construction awaits approval now being sought from the National Production Authority, the company has announced. The building, planned for textile research now being done in four scattered locations for the Textile Fibers Department, will be located on a 160-acre plot across from the Ferris School for Boys on Center Road. The director for the new textile research laboratory will be Dr. Lin-

ton G. Ray, Jr. He has been connected with the investigation of properties of synthetic fibers since he joined the company in 1943. He was named to the laboratory directorship in September of this year. Offices and laboratory will be in a two-story section 282 feet long and 62 feet wide across the top of the T-shaped structure. Laboratory equipment, textile areas, service and operating areas, will be located in a single story section 202 feet wide extending back 298 feet to form the bottom of the "T."

In addition to being used for the textile research division of the Textile Fibers Department, the new building will also centralize the department's customer service laboratories. It will thus furnish the sales divisions improved and expanded facilities for service to customers. Dr. W. L. Hyden, director of the textile research division, said that the building will contain 17 different rooms for laboratories in which will be studied the application of textile fibers, including Orlon acrylic fiber, Dacron polyester fiber, nylon, acetate, and rayon, to a variety of textile uses. Studies will also be made to determine which fibers, or combinations of fibers, are best suited for specific uses. "The new laboratory will provide facilities for fundamental and applied research on various phases of textiles. Chemical and physical laboratories, with requisite offices for technical personnel plus versatile equipment for conventional and special textile processing, are planned for the building," Dr. Hyden said. "This will include complete but small-scale equipment designed to handle fibers in quantities of less than one pound to several hundred pounds, all the way from yarn and staple to the finished dyed fabric."

It will accommodate approximately 100 technically trained personnel and an additional 200 technicians, operators, and clerical aides. Currently the personnel of the textile research division is located in four widely separated locations in the Wilmington area; namely, Newport, Del.; Vandever Avenue; the Du Pont Experimental Station; and Deepwater, N. J. The laboratory will consolidate the activities of the department's textile research division. "If the N.P.A. approves the project," Dr. Hyden said, "and we can get steel in the first quarter of next year, it is quite possible that the building may be ready for use sometime early in 1954."



## HEDDLE and REED COMPANY

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LOOM REEDS for any type fabric, COMBS, DROP WIRES and BARS for profitable production of Quality Fabrics

# The 17th Southern Textile Exposition

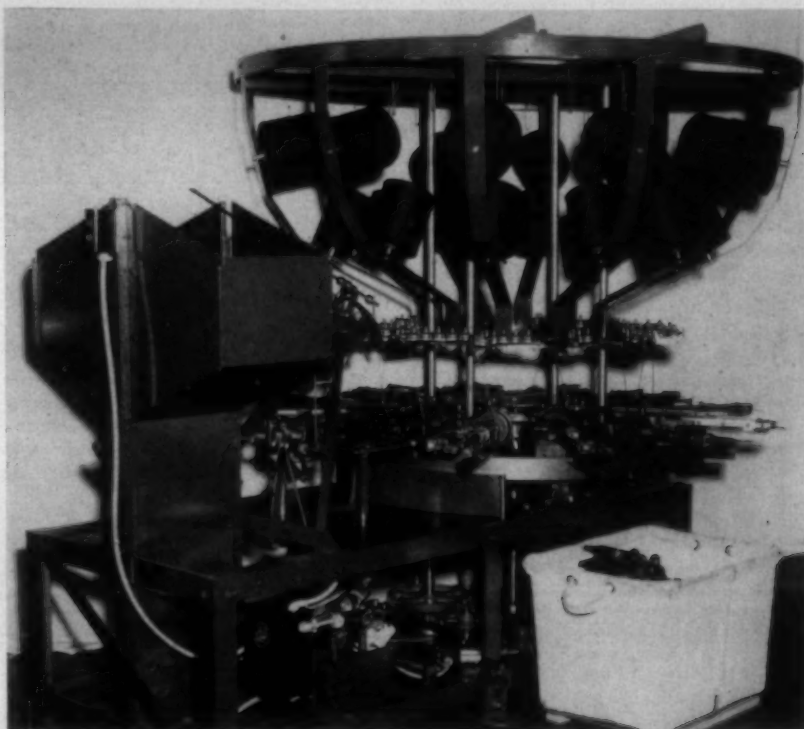
ACCORDING to figures compiled from registration bulletins published and distributed by TEXTILE BULLETIN at the 17th Southern Textile Exposition (held Oct. 6-11 in Textile Hall at Greenville, S. C.), show week attendance included 5,730 executive personnel of textile mills. This total is broken down into categories thusly: 267 administrative officials (mill presidents, vice-presidents, secretaries and treasurers); 150 purchasing agents and buyers; 1,359 managers, superintendents and assistant superintendents; 3,446 overseers, assistant overseers, foremen and supervisors; 508 master mechanics and plant engineers.

ABBOTT MACHINE CO. INC., introduced its fully-automatic radial quiller. The machine on display was hand-built and the firm is beginning tooling for production with manufacturing planned for the first quarter of 1953. This machine occupies 5½ feet by 7½ feet of floor space and was designed to give the small mill the advantages of automatic quilling and also to provide new flexibility in the number of winding operations that may be carried out simultaneously, it was explained. Production per operator on the new machine is estimated to be up to 2,000 bobbins an hour, depending on the type of yarn. This means production on filament is about three to four per cent in excess of standard machinery. In operation, the empty loom bobbins are dumped into the hopper, which holds about 300 bobbins, and are then fed automatically to the winding units. Uniform bunches are automatically built, it was explained, and the individual winding units are mounted on a large table which rotates to bring the winding units into loading position. The bobbins are filled in one revolution of this table. A measured yardage attachment will also be made available which will provide less than one per cent variation, it was said.

The Acme Steel Products Division of ACME STEEL CO. showed a new strapping machine which moderately compresses a package and simultaneously applies up to three steel straps. The Model F-3 Strapping Machine requires a minimum of installation time and, while designed primarily for the textile industry, has proved useful for any application where compressed packages must be strapped quickly and economically. The Model F-3 unit reduces handling required to process cases for shipment and storage. A more rapid flow of production results from the decreased strapping time. The machine features a movable platen with controlled compression as well as the ability to secure one, two or three steel

straps with independently controlled tensioning of each strap. An outstanding advantage of the Model F-3 is the relative simplicity of installation. The lower platen—just eight inches above floor level—re-

quires only a conveyor leading to and from the machine's lower platen at a similar height from the floor. Thus, the unit may be easily combined with existing standard conveyor installations. Another desirable



Abbott Machine Co.'s new radial quiller was the object of much interest at the 17th Southern Textile Exposition.



Acme Steel Co.'s Model F-3 was shown at Greenville for the first time.



## GREENVILLE SHOW

feature of this machine is the size of the upper platen. It is constructed so as to cover fully the top of a case being compressed. This construction assures a uniformly compressed case during the strapping operation. The square package which results is easily stacked for shipping and storing. The machine applies up to three straps at 15-inch intervals; tensions the straps; seals and cuts the straps. The Model F-3 strapping machine is operated by one man at a push-button control board mounted on the unit. The 110 v-60-cycle control circuit governs five machine operations: raising the platen for case clearance; feeding the Steel-strap to required length; lowering the platen to compress the package; tensioning and finally sealing the strapping. Compressed air, supplied at 50 p.s.i., is needed as power for these operations. Air pressure is easily regulated to deliver the desired platen pressure or strapping tension. Air gauges are located in full view of the operator permitting him constantly to observe whether case-sealing specifications are being maintained.

A new "package" drive for cards was introduced by ALLIS-CHALMERS MFG. CO. The drive consists of a 1½ horsepower, 1,740 r.p.m. standard enclosed motor, Falk gear reducer, automatic friction clutch and Texrope drives. The right-angle, single-reduction gear permits mounting the motor at a right angle to the card shaft, with the unit extending only a few inches into the aisle adjacent to the card. The drive mounts directly on the card cylinder shaft with a troque arm counted on the card base or suitable anchoring point. Thus, no vibration is present in any part of the card frame. The automatic clutch makes possible use of a motor with standard torque and eliminates high starting current driving the first few seconds of card operation. Two-step pulleys are provided on the reducer, a ten-inch sheave for stripping the cylinder, and a three-inch sheave for stripping the doffer. The unit is reversible and can be used for either right or left-hand mounting.

The LOUIS ALLIS CO. displayed three items in its booth. The first of these was an open, self-cleaning textile motor, complete with brake, with special mounting lugs said to be suitable for use with the new SG-1 Gwaltney spinning frame manufactured by Saco-Lowell Shops, Biddeford, Me. Another was the Select-A-Spede display unit demonstrating the use of magnetic amplifiers on the firm's standard control. This drive is claimed to be suitable for slasher drive applications, as well as other standard textile adjustable speed applications. The Adjusto-Spede display unit with mechanical parts for stimulating constant tension wind-up problems was also shown. A special electronic control circuit is being used to demonstrate this center-wind application.

ATKINSON, HASERICK & CO. featured the new gill reducers just introduced by Holdsworth Gill Screw Co., Inc. This is a single head, Holdsworth gill reducer with triple delivery. A high-speed coiler has been placed on this machine which will overcome the bottleneck in the second operation worsted or synthetic-blend process. This

type of machine with the triple-head coiler will also be available in a double-head machine with six deliveries, instead of the double-head, quad-delivery machine now generally used.

BACHMANN UXBRIDGE WORSTED CORP. had a big display featuring its Model B Gentle-air slasher dryer. The Model B is approximately 14 feet long, ten feet wide, and 8 1/3 feet high. According to company claims it will dry up to 750 pounds an hour, depending on counts and number of ends. This unit will handle beams up to 72 inches between heads, and the operation is automatic. Drying is accomplished by passing heated air through the yarn exhausting the moisture-laden air and, at the same time, introducing clean, fresh air to continue the drying cycle. Seventy to 80 per cent of the air is re-used.

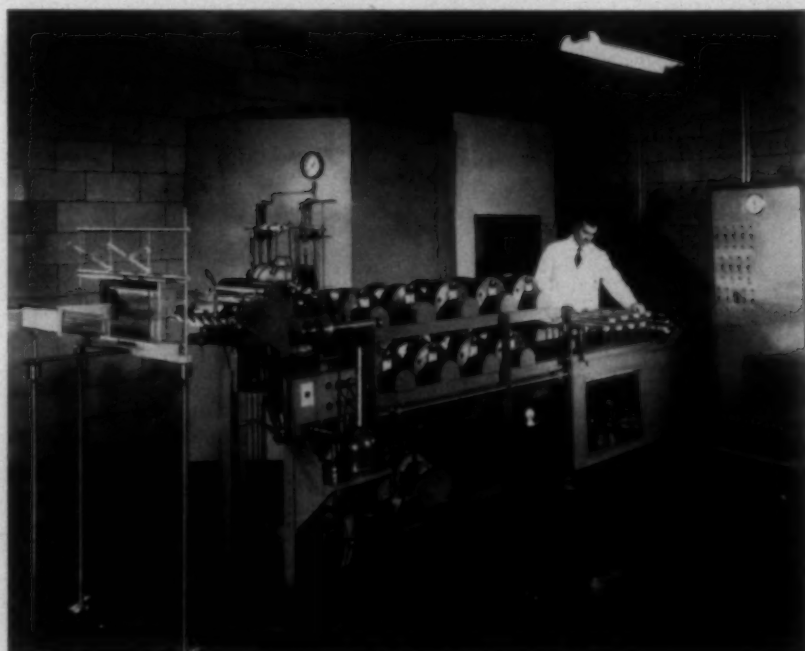
BARBER-COLMAN CO. displayed for the first time, a heddle counter and checker for counting the number of heddles per harness frame and checking the sequence of key holes for selection. Also on display for the first time was a power pattern punch for punching metal patterns to be used on the drawing-in machine.

Some 2,000 visitors had their vision checked by the BAUSCH & LOMB OPTICAL CO., Rochester, N. Y., in the largest public vision-testing project yet conducted by the firm. The testing was performed by specially-trained psychology students of Furman University, using four Bausch & Lomb Ortho-Raters, instruments which measure basic visual skills in relation to job standards. Coinciding with previous experience with Ortho-Rater tests, Bausch & Lomb said that 41 per cent of the people checked at the Southern Textile Exposition failed to meet the minimum desirable standards, and about half of these failed seriously. The 20 per cent who failed seriously were given letters of referral to their own eye special-

ists—ophthalmologists and optometrists—in the 13 states from which the show drew visitors, with the advice that they should seek prompt professional care. Those who failed less seriously were also referred to their eye specialists with the suggestion that a professional eye examination might prove helpful. The Ortho-Rater tests four visual skills against standards established for various jobs on the basis of experience: (a) acuity, or the ability to distinguish fine details; (b) stereopsis, or depth perception; (c) vertical and lateral phoria, or muscle balance; (d) color perception.

CORN PRODUCTS SALES CO. had on display a large backdrop photomontage of its pilot plant slasher recently built and put into operation at Mellon Institute, Pittsburgh, Pa. In an effort to supply the textile industry with up-to-the-minute factual information concerning starch sizes developed by the company, the pilot plant slasher at Mellon Institute will be used to study the sizing of all types of natural and synthetic yarns manufactured from either staple fibers or continuous filaments.

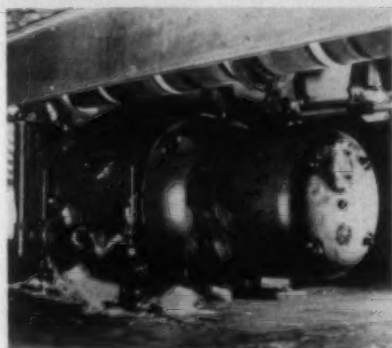
The DRAPER CORP. display emphasized the broadened use that has been built into the Model XD loom. Improved design, and addition of new mechanisms, and the increase in warp and filling package capacity make it practical to operate on a wide range of fabrics, according to company spokesmen. The X-2 which was introduced at the 1941 Greenville show was exhibited again, but incorporated improvements. The new ratchet take-up is claimed to permit the weaver to match the pick when there is a filling break so as to prevent thick and thin places in the cloth when the loom is again started. The exhibition X-2 loom was also equipped with an electric feeler and electric bobbin transferring mechanism. This new device is said to eliminate several parts such as the filling cam, filling cam follower and others. This feeler can only be provided on a mill



An enlargement of this photograph of the firm's new pilot plant slasher formed the principal background of the Corn Products Refining Co. display at Greenville.

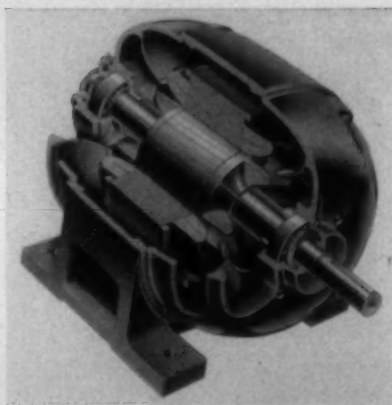
trial basis at present, it was said. A rebuilt E model was shown as an example of how looms can be modernized and strengthened; braced loom frames, plus spring-type crank arms, allow E models to run at higher speeds, it was said. The exposition model incorporated a 26-inch yarn beam in the conventional position, but it was said that overhead beams permit the use of even larger diameters with longer wraps and less down time.

A new spinning-frame motor, especially designed for the new Saco-Lowell, SG-1, Gwaltney spinning frame, was exhibited by the GENERAL ELECTRIC CO.'s small and medium motor department. The new motor is a totally-enclosed fan-cooled, self-cleaning



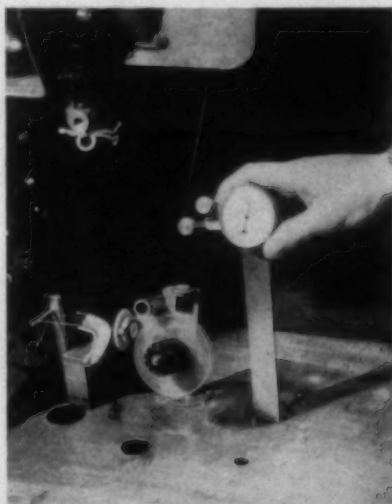
G. E. totally-enclosed, fan-cooled, self-cleaning textile motor with brake.

model designed to save floor space by fitting under the spinning frame. Major cleaning problems are eliminated because of the motor's totally-enclosed construction and its self-cleaning features. Stator frame, endshields, and fan guard have smooth surfaces to prevent lint accumulation. An external cooling fan made of non-sparking Textolite forces air over the outside of the motor frame and down the length of the spinning frame—thus distributing the motor heat over a wide area and reducing local hot spots. The electrical characteristics of the SG-1 motor provide maximum, almost constant efficiency for varying spinning loads from 50 to 115 per cent of the motor's full load rating. Grease fittings are conveniently located on sides of the motor for infrequent re-lubrication when necessary. The motor is equipped with a Stearns electric brake; also a thermostatic relay which automatically stops the motor in the event of an abnormal rise in temperature. The new design can also be supplied in a water-cooled model. Available ratings for both models are 15 and 20 horsepower at 1,800 r.p.m. Other ratings are available on special order. A new screenless open textile motor, especially designed for positive lint expulsion, was announced by the G. E. small and medium motor department. A simplified ventilation system provides both effective cooling and positive lint expulsion. Lint-laden air enters both endshields through large intake openings and is discharged through openings located farther out in the same endshields. Cooling fans, shaped to shed lint, force air and lint over end windings and smooth inside surfaces and out. Coil end-turns are filled with a special compound which provides a smooth finish and helps prevent accumulation of lint. The cast iron construction of



G. E. screenless open textile motor.

the frame and specially designed endshields protects the new G. E. motor against falling objects, dripping liquids, and corrosion. The rigid construction also prevents the motor from twisting out of line when it is bolted down. A large grease reservoir permits years of operation in normal service without re-lubrication; grease fittings permit re-lubrication when required. The new motor will be offered first in special ratings for "soft-start" textile applications. Standard ratings of 2-15 horsepower at 1,800 r.p.m., 1½-10 horsepower at 1,200 r.p.m., and 2-7½ horsepower at 900 r.p.m. will become available later. An improved hys-



The new G. E. tension brake shown controlling yarn tension during winding operation.

teresis brake that holds constant tension on yarn, wire, etc., by magnetic drag instead of friction was announced by the control department of G. E. The brake consists of Alnico magnets so designed and mounted that a magnetic drag (or hysteresis effect) offers a restraining force on a pulley. This force is essentially constant at all speeds and can be adjusted simply by turning the calibrated head mounted above the pulley. The restraining force of the magnets assures minimum abrasion on the yarn since the material is always in contact with the revolving pulley and is not rubbed or drawn over the surface. According to G. E. engineers, the new brake reverses the direction of rotation a few degrees after stopping, thereby holding stalled tension. The iner-

tia of the brake itself is slight enough that yarn does not become unthreaded during quick acceleration and deceleration. The construction of the brake permits operational speeds up to 700 yards per minute while tension control ranges from 3.5 to 10.5 grams. Applications for the device include tension control for synthetic and natural yarns.

At the display of GOSSETT MACHINE WORKS, INC., spectators' attention was centered around larger coilers, an official commented. This firm makes a new coiler head of 14 or 15-inch size carding and combing machines and 14-inch coiler for drawing frames. Sizes are 14x36 and 14v42 or 15x36 and 15x42. Mill results on the 15x36-inch size showed 105 to 122 per cent increase and as high as 162 per cent gain on the 15x42-inch head, over 12-inch can capacity, it was claimed. With the use of the company's new metallic drawing rolls on low-grade card sliver, one test on the Uster machines revealed 13.75 unevenness, it was claimed.

HUNT LOOM & MACHINE WORKS emphasized new looms in its display. The looms are new from the ground up, and the firm plans to increase its manufacturing operations so that Hunt looms will use fewer Draper parts. The HL-16, for instance, is composed almost entirely of Hunt parts, except for the Draper temple and the firm also plans to put its own temple on this unit, it was said. The machine also incorporates as a permanent feature, the Diehl drive. This HL-16 is the cotton loom that is said to be able to run at 164 picks per minute. It is equipped with the Hunt spreader and will accommodate up to 12 harnesses. It is made to weave cloth 60 inches wide. Parts are said to be interchangeable with the E model. The HR-50 was on display weaving fiberglass yarn manufactured by Owens-Corning Fiberglass Corp. and prepared by Slater Mfg. Co. division of J. P. Stevens & Co., Slater, S. C. The company plans to manufacture this as a whole new loom, too, it was said.

A new evenner was part of the exhibit of IDEAL INDUSTRIES, INC. The evenner may be used instead of the back rolls on the standard Ideal drawing and a representative said mills might replace their present Ideal back roll with full credit for the new. The device consists of deeply fluted rolls. These rolls are so actuated by the thick and thin places in the sliver that they reduce the variation. When a thick place enters the rolls the flutes so fill with stock that it cuts the effective diameter of the roll and feeds through slower than normally. Thinner places increase the effect of the diameter and feed the sliver faster.

A new stop-motion for warper creels has just been placed on the market by EDWARD J. McBRIDE CO., INC. Hermetically sealed mercury switches allow positive action, eliminating failures due to line or dust, according to Edward J. McBride, president. There are two types—one for heavy yarns, the other for light yarns, such as 15-denier nylon.

MOUNT HOPE MACHINERY CO. introduced a number of new devices to its

## GREENVILLE SHOW

cloth-handling machinery. Among these are (1) a non-lapping high-speed drive on the continuous roll feed which incorporates new automatic features; (2) precision guiders which remotely control.

PARKS-CRAMER CO. stressed its Gradumatic humidification which is able to automatically vary both air and water pressures to suit the requirements for maintaining a constant humidity. Output is controlled by a climate Psychrostat. Since the evaporative capacity of any good humidifying system must satisfy the maximum demand for moisture, there are many periods when much less than top capacity is needed, said company officials. The humidifiers deliver what is required of them, operating continuously whenever any appreciable amount of moisture is needed. Change in the requirement for evaporative output is noted by the Psychrostat, and the Gradumatic responds accordingly, it is explained.

After a year's research, PRECISION GEAR & MACHINE CO. has developed replacement kits for Draper looms, enabling mills to equip completely all moving parts with sealed ball-bearing units requiring no lubrication. This will lead to "simplification" of looms; for instance, a new self-adjusting friction let-off has 12 parts replacing the 57 on conventional models. Other new pieces developed by the concern include a sectional crankshaft, cam box head and an adjustable spreader. In addition the elimination of a large number of parts and lubrication, a reduction in maintenance costs is claimed. Also, it was felt, a lowering of cloth seconds caused by oil being blown into the fabric will be effected. With less parts, it was claimed by reversing the brace

below the beam, the use of a beam up to 24 inches is permitted without the need of brackets.

PROCTOR & SCHWARTZ, INC., claimed a saving in handling operations with the display of a scale-model fiber blending system. This system is engineered to the special requirements of the mill. It may be built for blending types of cotton, wool or synthetics, or mixtures of each of these fibers, it was said. The range measures the mix within one per cent accuracy, and by use of conveyor belts delivers specific quantity and desired blends to the pickers of cards as required, it was said.

RELIANCE ELECTRIC & ENGINEERING CO. demonstrated its motor for the Gwaltney frame for the first time. This is a 20 h.p. motor which comes in two models, one cooled by air, and the other by water. Slightly longer than the average 7½-h.p. motor it can be mounted horizontally beneath the frame. The fan-cooled motor equipped with an axial-flow fan, propels the air at high velocity over the motor and several yards beyond it. The rising air, consequently, is said to be evenly distributed over the spinning frame. The water-cooled motor has most of its heat carried away by water. This is accomplished by a unique air-to-water heat exchanger unit mounted on the side of the motor which isolates the water system from the electrical portion of the motor.

SOUTHERN STATES EQUIPMENT CORP. featured its individual drive for cotton cards. This unit eliminates line shafts and reduces card shutdowns, according to company officials. It includes a standard one-half h.p. 1,200 lint-free motor with splined shaft. Upon this shaft is mounted a cut-tooth driving pulley with splined bore,

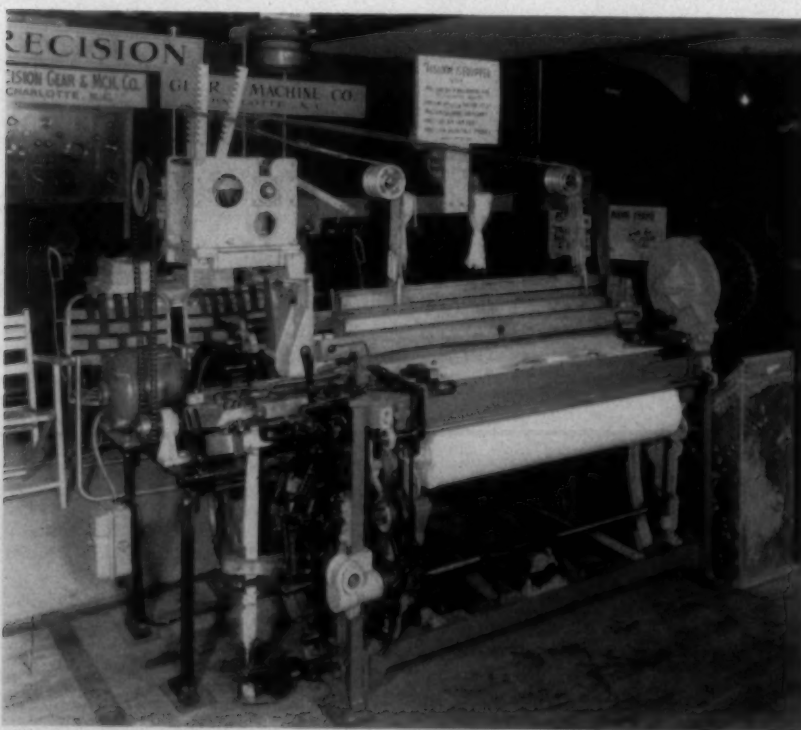
with a cast iron belt guard. This belt guard is connected to a stop bracket that controls the extreme limits for shifting. It also has two tight spring stops for positioning when driving to a loose pulley and to a tight pulley. Hand pressure on the shifter handle shifts the belt from loose to tight pulley.

TOWER IRON WORKS showed size boxes with some new design features. Among these is the head unit, which is engineered so that the comb is within easy reach of the slasher tender. The show units are equipped with a new Westinghouse multi-motor drive which replaces rotating parts with magnetic amplifier. This, it was said, provides more reliable performance and reduces maintenance.

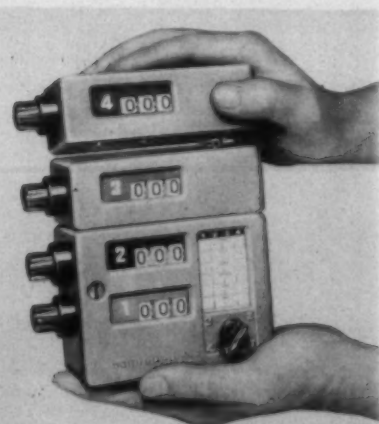
U S BOBBIN & SHUTTLE CO. is manufacturing a new wooden warper beam for cotton and synthetic fibers, including tire cord, it was stated at the company's booth. This is the first time the firm has made this type of equipment. Designed for any make of warping machine, the new item is constructed of four-ply rock maple with heavy duty steel rims. For rayon yarns, the beam has special type steel tension plates for rigidity of the heads, with aluminum inside supports tending to decrease the over-all weight of the beam, a representative explained. The firm also is turning out warper beam heads in its Lawrence, Mass., plant.

UNIVERSAL WINDING CO. demonstrated the principle of the Universal Up-twister with one-spindle unit. This spindle demonstrates the major ideas that were designed into the new twister. These include (1) a direct thread line from delivery bobbin to take-up; (2) increased production at lower cost because of a sharp reduction in operator handling; (3) a stop motion that eliminates burnt yarn because, when the yarn breaks, the package goes out of operation; (4) an automatic magazine tailing attachment; (5) pre-erection and factory run-in because the entire machine is shipped in three sections after testing at the plant and a machine can be in operation six hours after arrival at the mill.

Shown for the first time, a new design of 2-3 convertible counters, made by VEEDER-ROOT, INC., attracted much favorable at-



Precision Gear & Machine Co. displayed this loom, on which all moving parts are equipped with sealed ball bearing units requiring no lubrication.



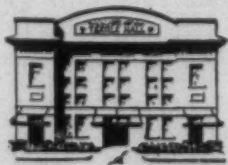
Veeder-Root's newly-designed 2-3 convertible counter.



teition from mill men at the show. This modern streamlined design is the work of one of the country's foremost industrial designers, Peter Muller-Monck of Pittsburgh. It features a gray crackle finish that blends with any looms or other textile machinery, with black plastic reset knobs that are not only easy to turn, but have built-in shear-pin protection. Larger "picture" windows make the figures easier to read. Internally, these new counters feature brass bearings on horizontal shafts, and oilite bronze bearings on vertical drive shafts. Part of this new counter package, also, is a new plastic drive connection which is a definite improvement over the former cast-iron unit in its exceptional ability to withstand humidity, shock and wear. This new design is now available in 2-3 pick, hank, yardage, and knitting counters.

WEST POINT FOUNDRY & MACHINE CO. exhibited a new hot air slasher. Called the Air-Dri slasher, it was designed to slash natural and synthetic staple fibers at speeds up to 1,500 pounds per hour. The machine is so constructed that wet splitting of the warp before the warp enters the drying chamber will reduce shedding at the slasher head end. Three centrifugal blowers force air past the heating steam coils and through nozzles which are claimed to distribute the warm air evenly and softly across the warp. Also highlighted was the Model 51 Callaway narrow fabric slasher. This unit can be used to slash narrow fabrics, short-run styles and samples as well as for tests and research projects. It is completely electrical. In this machine the warp is dried by electrically heated cylinders with drip heaters embedded in a metal shell. The size solution is heated by an immersion heater which heats a glycerine bath around the size vat. A rectifier converts the mill's alternating current to direct current to supply two variable speed d.c. motors driving the slasher. Tension and control are provided by variable speed sheaves between the cylinder section and size box. A constant tension take-up is provided by a rheostat controlling the beam drive motor. The rheostat is actuated by a dancer roll balanced against a dead weight.

Mass picketing outside the home plant of WHITIN MACHINE WORKS prevented shipment of the display booth and equipment which the firm planned to have for the Southern Textile Exposition. The substitute feature of the Whitin exhibit was an enlarged photostatic copy of a telegram from Whitinsville explaining the situation. This telegram, signed by J. Hugh Bolton, company president, read: "Display booth shipment still held up by mass picketing and inability to secure adequate state police protection. Proceed with substitute plans for establishing reception center in our space. Express our regrets to our many friends and customers, also to exposition officials."



Two views from the balcony of the second floor displays at the Greenville show.



Show week at Greenville was also World Series week in New York; a radio in the booth of TEXTILE BULLETIN was the reason for this crowd.

## Textile Session At A.S.M.E. Annual Meeting

The textile engineering division of the American Society of Mechanical Engineers will have its particular program on the final day of the A.S.M.E. annual meeting Dec. 1-5 at the Statler Hotel in New York City. The program will include the following papers: "Effects of Structure on Some Functional Properties of Textile Fabrics," by Louis I. Weiner, manager of the materials engineering laboratory, United States Army Quartermaster Depot, Philadelphia, Pa.; "Employee Attitudes and Productivity," by Douglas Williams, president of Douglas Williams Associates, New York City; "Integrity in Production Engineering," by N. M. Mitchell, president of Barnes Textile Associates, Boston, Mass.; and "Appraising the Operating Characteristics of Looms by Research Methods," by Victor M. Sepavich, research supervisor for Crompton & Knowles Loom Works, Worcester, Mass.

Chairman of the A.S.M.E. textile engineering division is F. D. Snyder of Westinghouse Electric Corp., Boston, Mass.; other officers are Lindsay Dexter of Pepperell Mfg. Co., Boston, vice-chairman, R. M. Jones of Saco-Lowell Shops, Biddeford, Me., secretary, and L. A. Runtun of Alexander Smith, Inc., Yonkers, N. Y., treasurer.

## Silicone Exposition In N. C. Next Month

The Dow Corning silicone exposition, largest and most comprehensive exhibit on the subject ever assembled, will be showing at the main ballroom of the Hotel Robert E. Lee in Winston-Salem, N. C., Dec. 9-11.

Silicones are a family of war-born engineering materials developed by the Dow Corning Corp. and its parent companies, the Dow Chemical Co. and the Corning Glass Works. Available in the form of fluids, compounds, greases, resins and rubbers, they are the only group of related materials which bridge the chemical gap between the heat-resistant but brittle inorganic materials such as glass and quartz, and the flexible but easily melted organic materials such as petroleum and plastic. As a result, silicones have rather extraordinary properties. They retain their original consistency at extremely high and low temperatures; they are particularly non-adhesive; they are excellent electrical insulators, and they are among the most water-repellent materials known.

Of particular interest to textile manufacturers is the water repellency of silicone treatment for synthetic and blended fabrics. Where ordinary resinous treatments will withstand two or three washings or dry cleanings, silicone treatment withstands a dozen or more. This feature is graphically illustrated in the exposition by a demonstration unit that washes, rinses, dries and sprinkles a section of treated cloth constantly. Even after repeated cycles, the cloth remains as water repellent as ever.

This is only one of the dozens of demonstrators which will be seen in action. Other units plunge silicone rubber into dry ice baths and into boiling oil. Silicone-bonded glass cloth laminates are subjected to 15,000-volt arcs without burning or carbon-tracking. Silicone insulated motors running at top speed, are repeatedly immersed in water. Backing up these demonstrators are literally hundreds of assemblies, cut-aways, samples, sections and parts of actual products illustrating the practical value of silicones on the job. Altogether there are ten tons of equipment and supplies making up the show. Because it takes about an hour and

a half to see it all, and also because it is keyed to the technical and engineering level, the exposition is not open to the general public.

The exposition will be open from 11 a.m. to 2 p.m. and from 4 p.m. to 7 p.m. daily. A staff of some 12 laboratory technicians and branch office representatives will be on the floor at all times to explain details and answer technical questions.

## Textile Chemical Manufacturers Elect Officers

The 21-year-old Processing Oils and Chemicals Association will change its name to the Textile Chemical Manufacturers Association, President E. E. Rettberg, Jr., announced in New York City this month. At a special meeting at the Hotel New Yorker, it was also voted to limit membership to those firms "engaged in the manufacture and sale of chemical specialty compounds for the textile industry and whose principal business is manufacturing," he said. The present membership falls into this category.

The T.C.M.A., the only group of its kind in the textile field, will be strictly a management organization, Mr. Rettberg said, with each member having the right to name a management executive as its representative. "Members are pledged to maintain high quality of products and ethical standards, and this organization will endeavor to establish among its customers in the textile field a feeling of confidence in the T.C.M.A. members," Mr. Rettberg continued. Plans are going forward to develop a seal which will be placed on all shipping containers indicating supplier's membership in the T.C.M.A.

Officers elected at the recent annual meeting in Atlantic City are: president, Mr. Rettberg, Sholler Bros., Inc., Philadelphia; vice-president, L. L. Grombacher, Standard Chemical Products, Inc., Hoboken, N. J.; secretary-treasurer, Clyde D. Marlatt, New York City. The board of directors includes: J. E. Allen, Arkansas Co., Inc., Newark, N. J.; V. H. Berman, Onyx Oil & Chemical Co., Jersey City, N. J.; S. G. Davenport, Kali Mfg. Co., Philadelphia; H. B. Dohner, Amalgamated Chemical Corp., Philadelphia; William J. Duddy, American Aniline & Extract Co., Inc., Philadelphia; Joseph B. Evans, Dexter Chemical Corp., New York; W. F. Fancourt, III, W. F. Fancourt Co., Philadelphia; Mr. Grombacher; John M. McChesney, Leatex Chemical Co., Philadelphia and Mr. Rettberg.

## Two Arthur Besse Scholarships Awarded

The first \$500 scholarships of the Arthur Besse Memorial Trust have been granted to two students at Philadelphia Textile Institute, according to F. W. Tipper of F. W. Tipper & Co., New York City, chairman of the memorial trustees. The students are David McConaughy, Ridgewood, N. J. (31 Randolph Place), and Stanley J. Zankman, Philadelphia (1205 Hellerman Street), both of the class of 1954.

The memorial trust was formed to "show a small measure of appreciation for the distinguished service rendered the wool textile industry" by the late Arthur Besse who served as president of the National Association of Wool Manufacturers for 18 years. The scholarships are being awarded on the first anniversary of Mr. Besse's death, Nov. 24, 1952. Mr. Tipper said two students at Lowell (Mass.) Textile Institute also would be selected for \$500 scholarships this year.

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Every pound of dormant scrap you can furnish will help to keep the steel mills and foundries producing



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1. Appoint one top official in your plant to take full responsibility for surveying the plant and getting out the scrap.
2. Consult with your local Scrap Mobilization Committee about its program to help out in the scrap crisis. The nearest office of the National Production Authority, Department of Commerce, can tell you who your local Scrap Mobilization chairman is.
3. Call in your local scrap dealer to help you work out a practical scrapping program. Non-ferrous scrap needed, too!
4. Write for free booklet, "Top Management: Your Program for Emergency Scrap Recovery", addressing Advertising Council, 25 W. 45th St., N. Y. 19.

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MORE SCRAP  
TODAY...  
MORE STEEL  
TOMORROW**



## FACTS YOU SHOULD KNOW ABOUT STEEL PRODUCTION

Steel production.....	1950.....	97,800,000 net tons
Estimated capacity.....	1952.....	119,500,000 net tons
Purchased scrap used*.....	1950.....	29,500,000 gross tons
Estimated purchased scrap requirement*..	1952.....	36,200,000 gross tons

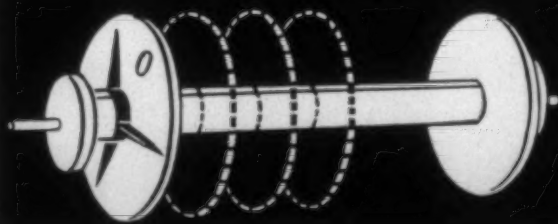
\*All consumers

*This advertisement is a contribution, in the national interest, by*

# textile bulletin

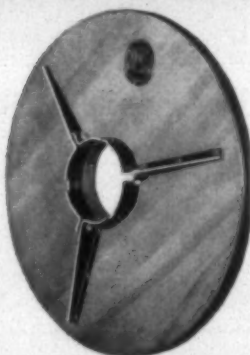


For different width goods  
on the same loom beams



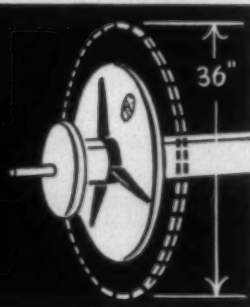
## ALLEN Adjustable Loom Beam Heads

Your orders call for different width warps on the same width looms. Allen Adjustable Heads solve the problem.



*These Heads are made to the famous ALLEN Standards, based on 35 years of know-how*

## New ALLEN GIANT-SIZE ADJUSTABLE HEADS



Have you considered the use of larger heads for your warps—to save drawing-in and change-over costs?

**THESE HEADS COULD MEAN THE DIFFERENCE  
BETWEEN PROFIT AND LOSS IN THE WEAVE ROOM**

### ALLEN BEAM COMPANY

High Speed Warper Beams  
Warper Beam Heads  
Loom Beams  
Adjustable Loom Beam Heads

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General Offices—151 River Road  
New Bedford, Mass.

Representatives in all Textile Localities  
and all Principal Countries of the World.

**"GOOD WARPS ARE MADE ON GOOD BEAMS"**

## Wool Bureau Review Of 1952-53 Season

Although world wool consumption in 1952 appears likely to be the lowest for any post-war year, concern over this fact tends to obscure the basic trends in the long-range wool outlook, the Wool Bureau declares in reviewing the current wool outlook. As an example, the bureau cites the fact that per capita consumption of wool in the United States during the post-war years 1946-1951 has averaged 62 per cent higher than during the pre-war years, 1934-1938—as compared to a six per cent decline in the rest of the world's per capita consumption during the same period.

While United States per capita consumption declined in 1951 to a post-war low-point, the bureau's report emphasizes, it is still 12 per cent higher than the 1934-1938 average, and is likely to rise in more normal years of textile activity. At the same time, per capita consumption in major wool-consuming countries throughout the rest of the world is tending to rise toward prewar rates.

Because increases in world population point to steadily rising total fiber requirements, the bureau points out, the so-called "battle of the fibers" is "an illogical, unscientific view of a situation which requires rapidly expanding production to meet future market demand." The bureau calls attention to a recent study by the World Health Organization which showed that more people have been added to the world's population in the first half of this century than the whole population in 1900, excluding Asia. The United States today has some 26 million more people than in 1939, and conservative actuarial projections to 1960 envision an addition of 14 million more. Not only will every available pound of the relatively stable annual supply of wool be needed, but increasing quantities of other fibers will be required as well, the bureau states, adding that time and consumer testing eventually will select from the host of new synthetic fibers now coming on the market those which fulfill satisfactorily basic requirements of textiles in terms of specific end-uses.

Supplies of wool from the 1952-53 clip to meet requirements are likely to approximate those from the 1951-52 clip, the bureau says. However, the composition of the clip may be somewhat changed, it adds, as a result of changes in the clips of individual producing countries. On the basis of scattered information, the bureau declares, it seems probable that the supply of fine merino wools will be smaller than last season. Thus, the current fashion importance of woollens—making timely use of crossbreds and lower grades of merino wool—is playing a part in bringing about greater price stability.

The dollar price of wool today makes it a good investment both as a raw material and as a converted consumer product, the review emphasizes. Compared both with pre-World War II levels of other internationally-traded raw materials and with pre-Korean levels, fine wool prices on the Boston market on Oct. 3 had increased less than many of these as a result of long-run inflationary tendencies. As of that date, wool was only 92 per cent higher than in 1939—compared with increases of 623 per cent in coffee, 312 per cent in cotton, 250 per cent in corn, 231 per cent in steers, and with 166 per cent as the average increase of 28 primary commodities. Compared with June 23, 1950—pre-Korean—wool on Oct. 3 was actually 14 per cent lower, while corn was 17 per cent higher, cotton 14 per cent higher, coffee 13 per cent higher and wheat 11 per cent higher.

The average of the 28 commodities was ten per cent higher. Pending estimates of the 1952-1953 world wool clip and of world wool consumption during the current calendar year by the International Wool Study Group, the bureau says, its review can only attempt to evaluate the trends from available information.

The calendar year 1951 was the first post-war year in which world wool consumption fell below production, it is pointed out. Previously, world consumption had risen each year since 1946—with the one exception of 1949—and had reached a peak of 2,675 million pounds, clean basis, in 1950. These levels of consumption exceeded the slowly expanding annual volume of world wool production. The resulting deficit in supply was met through withdrawals from the huge surpluses accumulated in major exporting countries during World War II.

The last world wool season—beginning theoretically in July, 1951, from a production standpoint, and in January, 1952, from a consumption standpoint—witnessed a continuation of the rising trend in wool production and the beginnings of recovery in wool consumption from its post-Korean low point in the third quarter of 1951, the bureau declares. Wool production for the season was estimated officially at 2,290 million pounds—a gain of nine per cent over the 1947-1948 low point. Wool consumption during 1952, based on estimates for six months or less in 11 countries and more recent press reports of continuing recovery in many of them, is estimated by the bureau's department of economics and statistics at about 2,150 million pounds. In addition, the United Kingdom is purchasing 60 million pounds for stockpiling purposes. The total of 2,210 million pounds, clean basis, is 38 million less than the 2,248 million pounds consumed during the calendar year 1951. It is 80 million pounds under the 1951-1952 wool clip, from which wool requirements for the calendar year 1952 are being met.

Most wool purchased at Dominion auctions and in South America during the next nine months will enter consumption in 1953, it is pointed out. Evidence from individual countries suggests that the disappointingly slow rate of recovery in 1952 is only now gaining a momentum which will be translated into higher rates of wool consumption during the first half of 1953. Here in the United States, the bureau reports, retailers are awakening to the fact that over-cautious and delayed ordering of wool apparel—particularly in men's and boys' lines—will result in late deliveries and a loss of seasonal sales. In addition, a renewal of government orders for wool textiles is expected to accelerate mill activity.

The Wool Bureau asserts that reports from the United Kingdom stress hand-to-mouth availability of wool and tops in the face of rising domestic and foreign demand for wool textiles. France's wool textile industry, still on short time as a result of reduced export trade and domestic price policies, is said to be showing signs of a pick-up—particularly in the combing section. Italy's wool textile industry has recently received a shot in the arm with large government orders for blankets and military cloth, the report continues, while Japan has been second to the United Kingdom as a buyer at current Dominion auctions. These reports suggest that wool requirements in general continue to rise, the bureau declares.

In describing possible changes in the consumption of the 1951-1952 clip, the bureau lists reports on wool production

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THE NEW PRECISION  
**NEB-800**  
PLASTIC COATED

THE PREMIUM BOBBIN-FOR PREMIUM WORK  
made to YOUR specifications

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- Steam at 200° is tough on bobbins  
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- High speed is essential today  
**THE NEW NEB-800 CAN TAKE IT!**

SATIN-SMOOTH, UNBELIEVABLY TOUGH, the New NEB-800 is the product of long, careful research, testing, proving. It is the most nearly indestructible bobbin on the market.



Write for your samples!

PRECISION AUTOMATIC LOOM BOBBINS for Cotton and Spun Rayon, Silk and Synthetics, Woolens and Worsteds.

Precisioned to Size — Precisioned for Concentricity  
Precisioned for YOUR Spindles . . .



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**LONGER LIFE**—Spiral card brushes, refilled the Gastonia way, last from 10 to 15 years, compared with 2 or 3 years when staples are used—for STAPLES WILL NOT STAY PUT IN SOFT WOOD. Gastonia first dips the bristles and fiber in glue, then they are permanently pegged in.

**BETTER FINISH**—To prevent lint from collecting on rolls, Gastonia paints them with high-grade bobbin enamel, which dries to a hard, glossy finish. Brushes can be refilled and returned in two days. Freight is paid one way.

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## LONGER LASTING BOILER FURNACES

"Boiler furnaces lined with CARECO last two to four times longer than those lined with fire brick. Write for quotation."

CAROLINA REFRACTORIES CO.  
Hartsville, S. C.

in five major exporting countries which contributed approximately 60 per cent of the 1951 world wool clip.

Although a slight increase has been forecast in the number of bales in Australia's current clip, its weight, plus pulled wool, is unlikely to exceed the 1,080 million pounds, greasy basis, produced in the 1951-1952 season. There has been an important change in the breeding policy of many graziers in good rainfall areas, it is explained, resulting in a lower proportion of merino wool in Australia's postwar clips than was normal before World War II. The current ratios of 72 per cent merino and 28 per cent crossbred compare with the 1938-1939 ratios of 84 per cent and 16 per cent, respectively. Improved values for fat lambs and crossbred wools are cited as the main reasons for this shift.

New Zealand's clip, predominantly crossbred, may be a little larger, it is reported, and barring unfavorable weather conditions, it is likely to continue expanding under the present policy of guaranteeing a reserve price for wool. There is no information on South Africa's expectations at present, the report adds, although unfavorable grazing conditions in certain parts of the Union suggest that there will be no increase in the clip. Reports on the Uruguayan clip are at variance, the bureau states. One source suggests a decline of nine per cent from last season's clip, it adds, while another source reports that various wool-growing districts anticipate that their new clips will be highly satisfactory both as to quantity and quality. There is no recent information on Argentina's 1952-1953 clip, the bureau's review continues. A mid-year report revealed that sheep population was apparently declining from the recent peak of 51 million, particularly among the coarser breeds. Rising production costs, combined with the accumulation of old clip wools for which neither monetary returns nor bank credit were available, are cited as contributing factors to this trend.

The firmness of prices in current Dominion auctions has not come as a surprise to those who were aware of the steady depletion of trade stocks in the United Kingdom and continental Europe, the bureau says. As a taker of one-fourth of total world imports of raw wool in recent years, the United States is an important factor in world wool prices over the course of a full season. Its influence is less important at the beginning of a season when most countries, having drawn down reserves during the Summer months, await the opening of the new auction season to replenish them.

The bureau's report explains that the apprehension associated with the impact of the South American surpluses on the price structure appears to have been dissipated. Reports from those markets indicate, it adds, that prices are following the pace set at the Dominion auctions. Although some interest is being shown at the auctions by American buyers, the bureau declares, American purchases will have to expand considerably to exert their normal influence on the price structure.

Several explanations are advanced, the report continues, for the current waiting attitude of American importers: (1) trade stocks in the United States, according to mid-year reports, were adequate in relation to the rate of mill consumption; (2) ample supplies of domestic wool are available for forthcoming military contracts, which will require its use to a large extent in accordance with the recent interpretation of the amended "Buy American" Act; (3) postponement of foreign purchases until the wools suitable for



American requirements are offered, as in other seasons; and (4) continued belief that prices will decline after the first flush of concentrated buying by countries with low stock positions.

The price of fine wool on the Boston market, largely due to a lack of spot activity, has been running at a discount on comparable wools in Australian auctions. In the London market, spot wools have been selling at a slight premium as a consequence of very urgent spot demand. This suggests, the bureau says, that domestic wools are under-priced in terms of what they would command on world markets. Earlier views that the bulk of the 1952 domestic clip would move into the loan program because of unfavorable prices are now being modified, the report declares. The clarification of the "Buy American" Act assures domestic wool used for military cloth at least the support price on the open market. Should the firmness of Dominion auctions affect the domestic market, as is normal, prices of domestic wools would be expected to rise above support levels, the report concludes.

### E. J. Neal Heads Carolina Yarn Association

Elliott J. Neal, vice-president of Aberfoyle Mfg. Co., Belmont, N. C., was elected president of the Carolina Yarn Association at the group's recent annual business meeting in Charlotte, N. C. Other new officers, all from Charlotte, are John L. Stickley, yarn and top dealer, vice-president; J. M. Ulmer, E. I. du Pont de Nemours & Co., Inc., secretary; and Alex S. Hanes, Jr., American Viscose Corp., treasurer.

Retiring officers, all from Greensboro, N. C., are John R. Sherrill, A. M. Tenney Associates, Inc., president; J. S. Campbell, Madison Throwing Co., vice-president; Charles W. Wolcott, Leon-Ferenbach, Inc., secretary; and James W. Furr, American Bemberg Corp., treasurer.

The association has scheduled its annual golf tournament and outing for May 14-16, 1953, at The Carolina in Pinehurst, N. C.

### Duplan Producing Nylon Crepe Fabric

Lyman B. Frieze, president of the Duplan Corp., has announced that the company has developed the first nylon crepe fabrics which have ever been produced in the United States, and these fabrics are now being woven in company mills. The fabrics have the pebble surface of a true crepe,

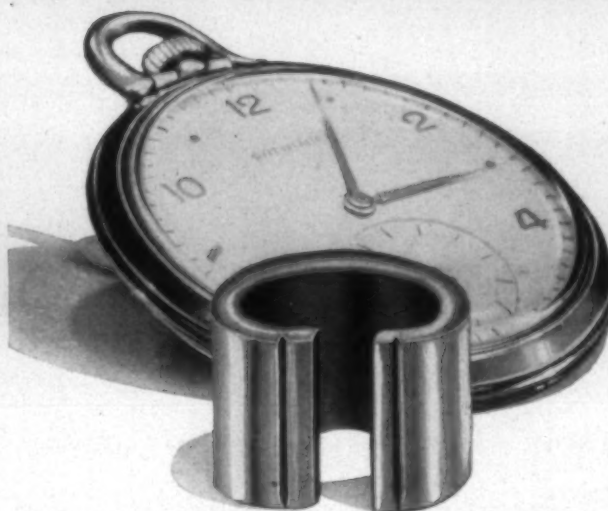
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made possible by Tekneek yarn for which a patent has been applied.

The new nylon crepe will not sag. It has the heat setting qualities of nylon which make it possible to design garments with permanent pleats. The crepe has the further advantage of being sewed without any sign of puckering at the seams. The fabrics have beautiful draping qualities, which are much sought after in the garment industry where styling and appearance are so important to sales.

The search for such a fabric has been carried on by many textile companies ever since nylon was introduced 13 years ago. The Tekneek yarn is the result of such research. The original production of fabric will go into higher priced women's dresses, blouses, and other garments.

Duplan is producing three nylon crepe fabrics. The original production quantities will be increased as rapidly as the nylon supply will permit. The first fabrics will be delivered to some of the best known fashion designers. This is the second time the Duplan Corp. has made history in the crepe fabric world. Twenty-five years ago it was the first to make rayon crepe.

### N.P.A. Revokes Last Textile Order

Removal of the last emergency control in the textile field was announced recently by the National Production Authority, Department of Commerce, in reporting the revocation of its high-tenacity rayon yarn order. The regulation, M-13, was issued Dec. 2, 1950, to spread the load of defense orders equitably over the rayon industry, N.P.A. said. Originally it limited the amount of DO-rated orders a producer must accept to ten per cent of his scheduled monthly production. This percentage was raised by successive amendments to 30 per cent.

In revoking the order N.P.A. explained that such control is no longer necessary in view of the small volume of rated business now being placed on the industry. Since July 18, 1952, the only defense ratings which apply on high tenacity rayon yarn are A, B, C, E, Z1 and Z2.

Other N.P.A. textile orders previously revoked are: M-23, carded cotton sales yarn and M-53, cotton duck, both of which were basically akin to M-13 in limiting the amount

of DO orders a producer was required to accept; M-56, which reserved waterfowl feathers for military use and stockpiling; and M-58, binder and baler twine, which was an inventory control.

### See Q. M. Standards As Civilian Basis

The prediction that standards of the Quartermaster Corps may one day be the basis of much civilian procurement was made recently by Major David M. Cooper, assistant to the chief, textile branch, Q.M. purchasing division, Armed Services Textile and Apparel Procurement Agency. Major Cooper made the statement in an address recently in Atlanta, Ga., before the textiles and knitted goods industrial group seminar at the Quartermaster Association meeting.

"Already, the rigid specifications and inspection set up by the Quartermaster Corps are found to be reflected in higher standards of quality civilian production."

"As an example," he said, "the government is trying to develop every woolen item to be shrink-resistant. In World War II more knitted garments were lost through laundry shrinkage than were worn out on the battlefield. Today, shrink-resistant treated garments can be washed throughout their service life without any appreciable shrinkage. This, accordingly, increases the life of the garment substantially."

"Clothing procurement for the Armed Forces reached a post-war high during fiscal year 1952, as a natural outgrowth of the increase in military strength to the highest level since the end of World War II. The industry, which constitutes a great part of your association, has evidenced a keen desire to participate in these procurements, as noted by the bidding tendered to the New York Quartermaster Procurement Agency."

"From July, 1951, through June, 1952, the New York Quartermaster Procurement Agency made many major procurements of various items," the major said. Among the examples he gave were 14 million pairs of woolen socks, 17 million cotton undershirts, 10,423,000 towels and 14 million yards of rayon twill.

"This agency also procured approximately 170,000,000 yards of Army and numbered ducks for deliveries September, 1951, through June, 1952, with an additional 17,500,



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000 yards of cotton duck for deliveries June, 1952, through March, 1953. We also purchased approximately 206,000,000 yards of cotton and nylon webbings for deliveries July, 1951, through December, 1952.

"Current procurement methods, like those of other procurement agencies in the Department of Defense, are conducted according to the armed services procurement regulations of 1948," he said. "They emphasize reversion to peacetime procurement by formal advertising, with the submission of closed bids publicly opened.

"With the return to peacetime methods of procurement, quality and conformity with specifications have again become the major issues involved. Contracting officers at N.Y.Q.M.P.A. exercise great care in evaluating a bid on its over-all merits, both in the interest of the government and the contractor. Among the primary factors considered in making awards are the bidder's financial ability, technical know-how, past and present performances on government contracts, and the adequacy of his facilities to produce according to delivery schedules."

### Develop New Textile Printing Machine

A Norwegian engineer has developed what is described as a sensational textile printing machine that is said to be 60 times more efficient than any similar press used in Europe. The inventor, Ulf Serrander of Oslo, has taken out patents on it in a number of countries. His 12-by-six-foot press can print multicolored patterns on any kind of textile at the rate of 3,600 feet per man-hour. It uses a large number of synchronized stencils, one for each color. The product is said to compare favorably with hand-printed goods. The machine's cost is reported to be about one-fourth of that of comparable presses that require three operators to the Serrander machine's one.

### New Textile Association Gets Charter

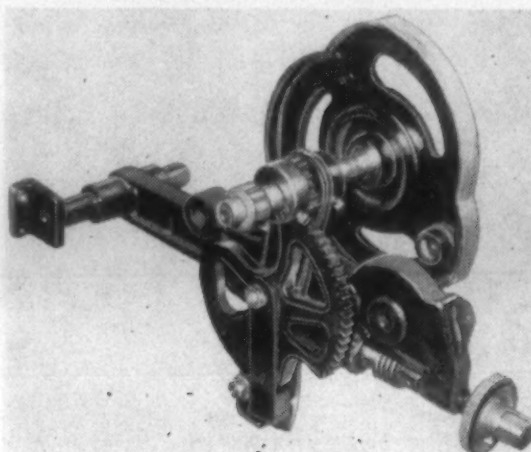
A new textile association, Southern Textile Methods & Standards Association, recently obtained a South Carolina state incorporation charter as a non-profit corporation. The association currently has its headquarters at Lyman, S. C. Purpose of the new association is the "advancement of sound and equitable principles of industrial engineering as used in the Southern textile industry." Officers are Ned Bobo of Lyman, president; L. C. Sheehan of Macon, Ga., vice-president; Rhett Ball of Atlanta, Ga., Julius H. Ramsey of Valdese, N. C., C. E. Lawton of Dalton, Ga., and J. E. Sullivan of Winnsboro, S. C., directors.

### Rayon Shipments For October Listed

October shipments of all types of rayon and acetate totaled 100,900,000 pounds, a gain of 22 per cent over the corresponding month of 1951, but seven per cent under shipments in September of 1952, according to the *Textile Organon*, statistical bulletin of the Textile Economics Bureau, Inc. For the fifth consecutive month, the *Organon* points out, shipments by the industry have exceeded 100,000,000 pounds. Shipments in October comprised 99,500,000 pounds to domestic consumers and 1,400,000 pounds for export. October production was at 83 per cent of rated capacity.

High tenacity viscose yarn shipments last month increased slightly over September and were 15 per cent higher than

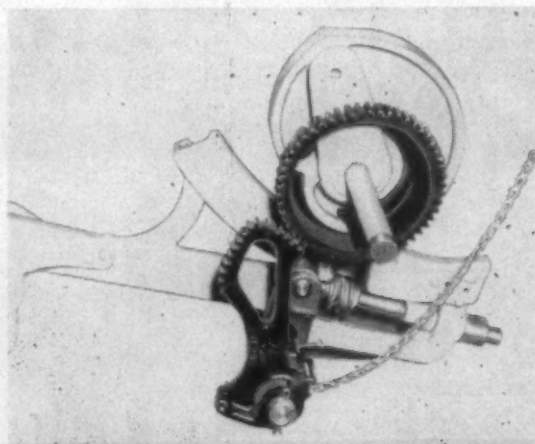
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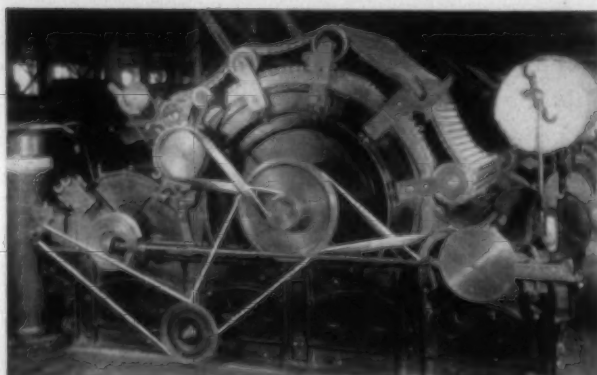


This Bunch Builder device for a warp spinning frame makes a skill wind at the beginning, laying the first lap on the bobbin so as the tail of the thread will not whip up into the way of the top of the bobbin, breaking down on the last lap. Without this device, a piece of thread is left on the bobbin which is to be wound off or cut off, taking up the time of the operator as well as making imperfection on the bobbin with a cutting instrument which will sooner or later have to be replaced and is also expensive.

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the 29,900,000 pounds shipped in October, 1951. Production was down somewhat and producers' stock of high tenacity viscose dropped to 4,600,000 pounds at the end of October. The *Organon* notes that some high tenacity productive facilities have been reconverted to regular tenacity yarn in recent months.

Acetate yarn shipments, which had hit a high of 30,800,000 pounds in August, declined to 28,200,000 pounds in September and fell again to 23,000,000 pounds in October. Production exceeded shipments in both September and October and stock has risen to 13,700,000 pounds. This stock, however, represents only a two weeks' supply on the basis of third quarter shipments.

Regular tenacity rayon yarn shipments totaled 19,100,000 pounds in October, down slightly from September but 29 per cent over October, 1951. Production in October continued its general upward trend and stock fell to 40,100,000 pounds or a nine weeks' supply at the third quarter shipment rate.

October shipments of rayon staple + tow amounted to 18,000,000 pounds, a figure about the same as the third quarter average, but October production was 400,000 pounds greater than shipments and stock rose to 9,600,000 pounds. Acetate staple + tow shipments, which averaged 9,400,000 pounds monthly in the third quarter dropped 33 per cent in October to 6,300,000 pounds. Stocks at month-end reached a total of 8,100,000 pounds, the highest figure since last April.

Rayon staple imports in September, according to the *Organon*, totaled 5,001,000 pounds and were off 16 per cent compared to August. Imports in the first nine months of the year amounted to 58,062,000 pounds, a decline of 21 per cent from the corresponding 1951 period. Principal suppliers this year have been Norway, United Kingdom, Germany and the Netherlands. The staple import data include what are believed to be small amounts of acetate, as well as perlon staple. Imports of the latter, according to estimates from a foreign source, are at a rate of around 3,000,000 pounds a year.

An analysis by the *Organon* of third quarter production of rayon and acetate reveals that output totaling 310,600,000 pounds was 24 per cent over the second quarter and the highest figure since the third quarter of 1951 when 337,300,000 pounds were produced. The third quarter output was made up of 227,800,000 pounds of filament yarn and 82,800,000 pounds of staple.

Viscose high tenacity production, as in the preceding

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quarter, remained close to capacity levels during the third quarter. Rayon staple and tow, while not using productive facilities to the same extent as high tenacity filament yarn, also showed a continuing high level of production from the second to the third quarter of the year.

In the acetate category, both filament yarn and staple, third quarter production rose sharply compared to the second quarter, as did rayon regular tenacity yarn. Acetate yarn production in the latest quarter at 77,900,000 pounds was 85 per cent greater than in the preceding quarter and was not far short of the high production rate maintained throughout 1950 and the first nine months of 1951. While the increase in acetate staple+tow was not as spectacular, third quarter production of 29,600,000 pounds was 56 per cent higher than the preceding quarter.

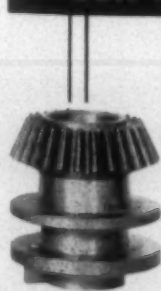
Third quarter output of rayon regular tenacity yarn amounted to 44,000,000 pounds, a gain of 37 per cent over the second quarter, which was a low point for this division of the industry.

Analyzing yarn shipments by trades, the *Organon* reveals that broad weavers in the third quarter purchased a total of 119,100,000 pounds, an increase of 53 per cent over the preceding quarter and 23 per cent over the third quarter of 1951. Shipments to the broad woven goods trades so far this year, however, are at an annual rate of about 350,000,000 pounds, a figure well below the four preceding years. While fourth quarter shipments will raise the current year's total above the nine-month annual rate, it is clear, according to the *Organon*, that the 1951 shipments to this trade will not be equaled in 1952.

Shipments for tires and related uses were above the 100,000,000-pound mark for the second consecutive quarter. Of the 300,300,000 pounds shipped so far this year, it is estimated that 290,600,000 pounds went to tire manufacturers and the balance to the hose and belting trade. Other rayon and acetate yarn markets took a total of 29,300,000 pounds in the third quarter compared with 21,900,000 pounds in the second quarter and 28,600,000 pounds in the third quarter of 1951. In these other trades, the best gains were made in the warp and circular knitting segments.

The textile recession which ran roughly from the fourth quarter of 1951 through the middle of 1952 and cut deeply into rayon and acetate output, had little effect on the non-cellulosic man-made fibers such as nylon, Orlon, Dacron, dynel, etc. Production of these newer fibers rose steadily through the first quarter of 1952 when a total of 63,900,000

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pounds was produced, fell back slightly to 60,700,000 pounds in the second quarter, and then went up to a new high of 65,600,000 pound in the third quarter.

### To Use Consolidated Bidders Lists

Existing bidders lists of the four military services—Army, Navy, Air Force, and Marine Corps—whose functions have been transferred to the new Armed Services Textile and Apparel Procurement Agency, 111 East 16th Street, New York, will be used in the issuance of future advertised invitations for bids and negotiated requests for proposals, it was announced recently by Brig.-Gen. R. P. Hollis, U.S.A., chief of agency staff.

Bidders lists of the procurement agencies formerly handling textiles, apparel, footwear, and related requirements for all of the armed services were transferred and consolidated with the activation of the new joint agency, A.S.T. A.P.A., on Oct. 1, 1952. Manufacturers and regular dealers previously listed by the four agencies separately will accordingly continue to receive the invitations and requests for the items in question.

### Dellinger Heads Piedmont Safety Council

Roy Dellinger, superintendent of Plant No. 11 of Cannon Mills Co. at Rockwell, N. C., recently took over as chairman of the Southern Piedmont Safety Council, whose membership is made up of delegates from eight North Carolina counties. Also installed were W. L. Brightwell of Johnson Mfg. Co., Charlotte, vice-chairman; Ralph Hoke, Jr., safety director of Cannon Mills, secretary; Smith Poplin of Wiscasset Mills, Albemarle, treasurer. Following the installation, the 500 delegates heard a talk by Thomas L. Carroll, Charlotte, of the National Cotton Council of America.

### S. C. Leader In Cotton Woven Goods Output

South Carolina was the national leader in finished cotton woven goods output last year, producing 1,218,821,000 linear yards. The figures, released recently at Columbia, S. C., by W. B. Worthy, district manager of the U. S. Department of Commerce, show the state out-produced runner-up Massachusetts by more than 1.1 billion yards.

South Carolina, along with North Carolina and Georgia, produced 38 per cent of the country's total finished cotton woven goods, 2,580,957,000 yards. Output in the region as a whole was down from last year. Reduction was not as sharp in South Carolina—approximately 62 million yards.

The state of South Carolina also was active in the production of synthetic woven goods last year, realizing an output of 31,561,000, a slight reduction from 1950.

### Ga. Operating Executives Elect Hampton

More than 300 members of the Textile Operating Executives of Georgia assembled in Atlanta, Ga., last month for the annual meeting of the group and elected T. M. Hampton, superintendent of the Hillside Plant of Callaway Mills Co., LaGrange, Ga., general chairman of the group. Mr. Hampton succeeds Robert J. McCamy, superintendent of Pepperell Mfg. Co., Lindale, Ga.

Turner Scott, general superintendent, Martha Mill, B. F. Goodrich Co., Silvertown, Ga., was elected vice-chairman succeeding Mr. Hampton, Herman A. Dickert, director of



the A. French Textile School, Georgia Tech, was re-elected secretary-treasurer. Two new members of the executive committee elected at this time are George McMillan, superintendent of Crystal Springs Bleachery, Chickamauga, Ga., and Chas. R. Bollen, John P. King Mfg. Co., Augusta, Ga.

During the technical session the Georgia operating executives discussed problems and means of more efficient operation of their plants.

Mr. McMillan presided at the discussion on slashing. A majority of the mills reported no trouble with rubber or synthetic covered delivery rolls on slashing and several mills with as much as three years' experience have had no trouble with roll swelling. Coarse jute yarn was mostly used as a base for covering yarn-wound squeeze rolls with No. 10 favored. Some used yarn as a base and buildup with wool and cotton. One mill reported roll covering cost reduced by 33 per cent in changing from blanket wound to yarn wound squeeze rolls. The frequency of running lease strings varied among Georgia mills from every beam to every fourth beam.

Most mill operators favored selvage creels to control tension of ply yarn in slashing warp with single yarn in the body and ply yarn in the selvage. One controlled the tension by decreasing the number of ends of ply yarn in the dent in hack. Producing of a good section beam and keeping section beams in good condition at all times will prevent selvage from rolling, it was reported. A number of Georgia mills use a wet split in slashing and few had experienced any trouble. Considerable discussion was given to mill experience with homogenizers. Most reported that it is possible to use less starch per gallon and maintain uniform size content in the warp.

Decreases in shedding at slasher and looms with the size content of warps about the same was noted. If the pressure is watched carefully, there is little noticeable change in the size pick-up at the same viscosity, it was reported.

One and one-half hours was conceded to be the cooking time on thin boiling starch to give best results. Forty-two r.p.m. was the most generally accepted speed for agitators using this boiling starch for cooking kettles with a variance of from 20 to 40 r.p.m. reported for storage kettles. A properly balanced size formula and constant level was given as the best method of obtaining uniform size pickup on yarns of different counts and from one set to another on same yarn counts but different number of ends. The constant speed and varying pressure type Moist-O-Graph controls on slashing are more generally favored, it was indi-

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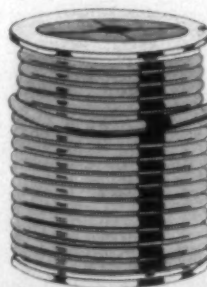
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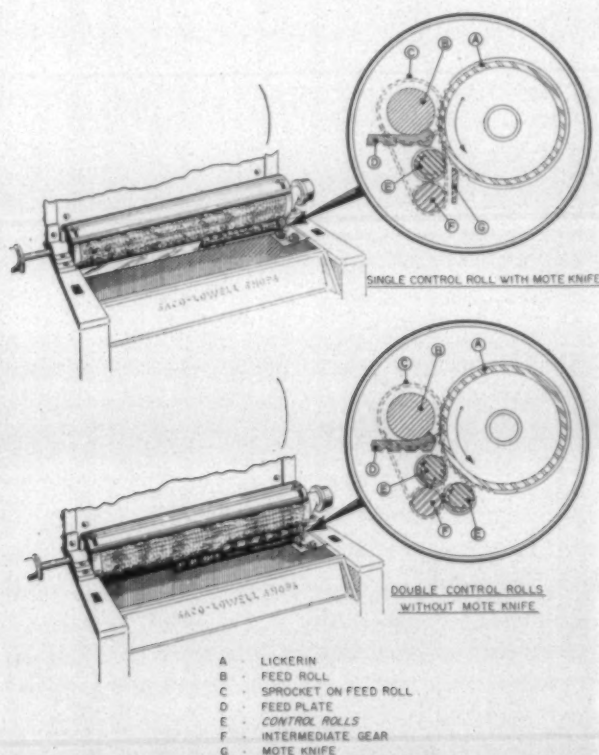
GASTONIA, NORTH CAROLINA

cated. Most mills had found size marks shown on yarn when the slasher is stopped for doffing as much as 30 seconds. They recommended speedier doffing.

Alex Fife, Scottdale Mills, Scottdale, Ga., presided over the weaving session. The approximate operating life of harness frames was reported as about ten years, although instances of as much as 15 years were cited. Mills had had little experience with the use of rust preventives. Most maintained a relative humidity of from 80 to 85 per cent in the weave room. Endless check straps were still in the experimental stage, and the operators were reporting some difficulties. While harder to keep adjusted, some felt that they would result in improved general running of the loom.

Two mills reported that difficulty had been experienced in getting synthetic or rubber temple rolls to hold the fabric on rayon or nylon. A clearance of 1/32 inch between the sides of the yarn on the quill and the shuttle opening is used by a number of mills, while others favored 1/16 inch. Vibrating whip rolls have been found to improve loom efficiency and cloth quality on most fabrics. Heavy drills, twills, flannels, drapery fabrics, industrial cloths and plain cloths with heavy filling were particularly cited as being improved.

## Control Rolls For Cards Described



Saco-Lowell Shops' control rolls for cards are described in the company's news letter No. 820, recently distributed by the firm. The news letter, which follows, covers this assembly from the technological standpoint.

"The conditions existing in the card in the area around the feed roll and feed plate have been under study by our engineers for some time. The need for an improvement in this area became accentuated with the advent of the synthetic fibers, especially since many of them have a higher inter-fiber coefficient of friction, which makes the separation of the individual fiber from the fringe much more difficult. As

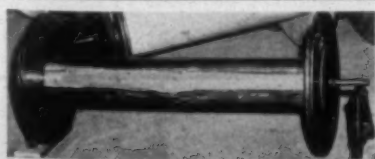
a result of this inherent condition, the sliver irregularities due to plucking become accentuated.

"As a matter of fact, a close analysis of the conditions existing in this area even in a card which has properly fitting feed roll bearings, shows that the control of the fringe is not always effective; that under certain conditions, such as variations in density of the lap, will allow the detachment of lumps of fibers instead of the individual fiber. The application of the new control roll to the card will eliminate practically all of the defects in the sliver due to plucking.

"With the lap fed to the lickerin over the nose of the feed plate under pressure, the sheet is compressed to approximately 1/32 inch. With the nose of the feed plate separated from the teeth of the lickerin by .010 or .012 inch, the teeth of the lickerin cut through the fringe of the lap held between the feed roll and the feed plate to their full thickness. Any unevenness in the thickness of the lap across the feed plate results in thin places not tightly held between the feed roll and the feed plate. Under these conditions, the lickerin tended to pluck in the thin places between the thick places which are firmly held. Consequently, the fringe was uneven, the feed to the card cylinder was uneven and wherever these bunches went between the cylinder and the flats there was a tendency to fill in the wires of the cylinder and the wires on the flats. There has been a recent development in this line in which a wire-wound roll is placed directly below the nose of the feed plate and revolves in the same direction as would a bottom feed roll. The teeth in this wire-wound roll point in the opposite direction to its rotation. The feed plate is then adjusted to .035 to .050 inch from the lickerin. The wire-wound roll is set .007 to .010 inch from the lickerin and is rotated at a surface speed ten to 15 per cent faster than the surface speed of the feed roll.

"With this arrangement, the lickerin takes the fiber from the lap on the upper surface as it is fed through by the feed roll. This loosens the fiber in the lap and throws it in a soft condition on the wires of the control roll. The action of the lickerin over the surface of this roll is to completely separate the fibers from each other while they are in a loose condition.

"Because of the air spaces between the teeth of the wire-wound roll and of the lickerin, there is no tendency to damage the fibers while they are being separated. This results in a more nearly uniform feed from the feed plate and a much better distribution of the fibers as they are thrown on the cylinder by the lickerin. Because of the



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complete fiber separation there is less tendency for the flats and the cylinder to load up during operations.

"In running cotton or like fibers it has been found desirable to use one control roll and one mote knife. Where synthetic fibers are being run it is desirable to use two of these control rolls, one immediately following the other. The first roll should be set from .012 to .015 inch and the second roll from .010 to .012 inch from the lickering. The fibers up to 4½ inches can be run successfully where these rolls are applied to the existing card with three sets of workers and strippers.

"The application of these rolls to existing cards of Saco-Pettee or Saco-Lowell manufacture is very simple. It is only necessary to drill one hole in the card side for the drive and two tapped holes in the shelf to apply the driving bracket. They are so arranged as to fit equally on right or left hand cards. It will be possible to apply these rolls to other makes of cards as we obtain the necessary information with regard to the present feed plate and mote knife arrangement. It will also be necessary to know the model and year of manufacture of these various cards. These control rolls can be applied to both revolving flat cards and to roller top cards."

### September Yarn Inventories Reduced

Inventories of carded cotton sales yarn spinners were reduced in September but mills also ate into unfilled order backlogs as sales lagged behind production and shipment rates, the Textile Information Service reports.

At the end of September, spinners still had sufficiently large backlogs of orders to keep them busy for the next 60 days or more but unfilled orders on their books were down nearly five million pounds from the beginning of the month. As of Oct. 4, spinners' backlogs amounted to 9.02 weeks' production and were 9.63 times the stocks on hand. This compared with backlogs on Aug. 30 equal to 10.08 weeks' production and 9.13 times inventories and with unfilled orders on Oct. 6, 1951, amounting to 10.49 weeks' production and 6.28 times stocks on hand.

Total yarn in stock on Oct. 4, including yarn made for future deliveries against unfilled orders, was equal to 93.6 per cent of a weeks' production. On Aug. 30 stocks amounted to 1.10 weeks' output and on Oct. 6 last year they were equivalent to 1.669 weeks' production.

Based on statistics of the Carded Yarn Association covering reports from 1.4 million member spindles, production in the week ended Oct. 4 consisted of 32.8 per cent knitting yarn, 49.2 per cent weaving yarn and 18 per cent all others. On Aug. 30, the percentages were 33.7, 48, and 17.3, respectively, and on Oct. 6, 1951, they were 29.3, 58.6 and 12.1.

### Textile School Deans Hold Parley

Acquainting the country generally with the facts about the textile industry and the position it has achieved in recent years is considered as one of the outstanding problems facing the industry, according to speakers heard at the annual meeting of the National Council of Textile School Deans. Nov. 9-10, at Boston, Mass. They pointed out that the needs of the industry for trained men had already reached the stage where they were greater than the number of graduates these schools matriculated.

It also was pointed out that the forward strides made by

textile schools in recent years are only a prelude to what they can accomplish with the aid of more money from state appropriations, foundations, industry contributions and alumni funds. Stressing the human relations angle, one speaker declared that textile education should give the graduate that something that he can't get in books, but which is so vital in making him the successful foreman which the industry is seeking.

Those attending the meeting of textile school deans were: Herman A. Dickert, dean, A. French Textile School, Georgia Institute of Technology; Dr. F. M. Feiker, Textile Foundation consultant; Edward T. Pickard, Textile Foundation; Cleveland L. Adams, Alabama Polytechnic Institute, School of Textile Technology; Dr. Hugh M. Brown, dean, Clemson College Textile School; Malcolm E. Campbell, dean, N. C. State College Textile School; Leslie B. Coombs, Bradford Durfee Technical Institute, Fall River, Mass.; Richard S. Cox, dean, Philadelphia Textile Institute; W. D. Fales, head of textile school, Rhode Island School of Design; John E. Foster, president, New Bedford Textile Institute; Dr. Laconla Hance, chairman, committee on academic studies, Institute of Textile Technology, Charlottesville, Va.; Bertrand W. Hayward, director, Philadelphia Textile Institute; Martin J. Lydon, president, Lowell Textile Institute; L. E. Parsons, head, textile engineering department, Texas Technological College, Lubbock, Tex.; Dr. G. Nathan Reed, dean, Lowell Textile Institute; Joe L. Vaughan, president, Institute of Textile Technology, Charlottesville, Va., and Prof. Rogers Finch, Massachusetts Institute of Technology.

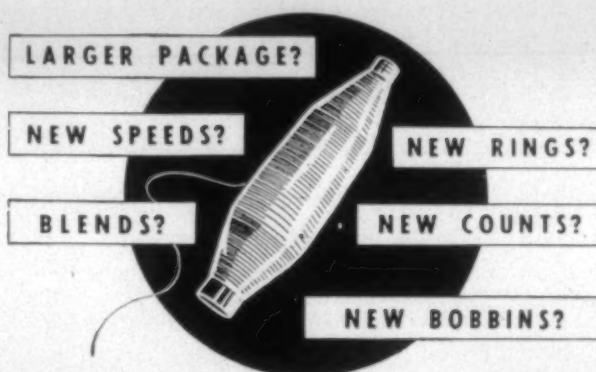
### Synthetics Seen Moving In On Cotton

The Agriculture Department recently predicted an increased production and use of synthetic fibers during the next two years and a corresponding decline in demand for American cotton. The department estimated cotton consumption during the current 1952-53 season would total nearly 14,000,000 bales, a slight decline of about 800 bales from last season. Demand for cotton in the 1953-54 crop year, the department added, "probably will be somewhat smaller than in 1952-53" with both foreign and domestic markets taking less.

The department said a decrease in exports this year will be offset by a slight increase in domestic use. Domestic mills will take some 9,500,000 bales this season, up slightly from last season, the department figured. The increase is



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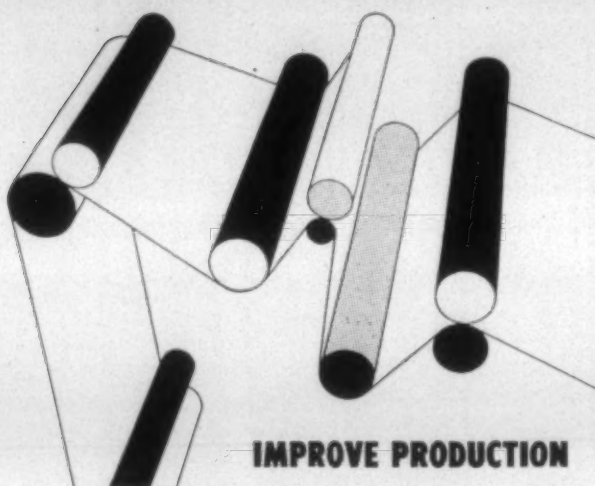
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based on expected prospects for a high level of economic activity and an increase in consumer purchasing power. The department said excessive inventories of cotton textiles here also have been reduced.

Cotton exports this season are expected to decline to about 4,500,000 bales, compared to the 5,500,000 bales shipped abroad in 1951-52. Foreign stocks of cotton have been built up from the depleted state they were in a year ago.

On the other hand, the department forecasts increases in foreign and domestic use of synthetic fibers, such as rayon and nylon. Experts said future expansion of synthetic industries both abroad and at home will continue at about the same rate as that from 1950 to 1951.

In 1951, world production of synthetic fibers hit 4,218,000,000 pounds compared to 3,664,000,000 in 1950. American output, expanding more slowly than in many foreign countries totaled 1,504,000,000 pounds in 1951 against the 1,405,000,000 pounds of synthetic fibers turned out in 1950.

## N. C. Textile School Has 501 Students

The total enrollment in the School of Textiles at North Carolina State College during the current term stands at 501, Dean Malcolm E. Campbell announced recently. A breakdown of the enrollment by classes shows that there are 150 freshmen, 110 sophomores, 100 juniors, 123 seniors, seven special students and 11 graduate students. There are 58 veterans of military service, and six women enrolled.

Twenty-three states in the United States, and 25 foreign countries are represented in the student body. North Carolina, with 262 students, leads the states in the number of students enrolled. The enrollment includes 438 from the United States and 63 from foreign countries.

States represented in the student body and the number of students from each: North Carolina, 262; New York, 80; New Jersey, 19; Pennsylvania, 14; Virginia, 12; Massachusetts, 11; Wisconsin, six; Florida, South Carolina and Tennessee, four; Indiana, three; Connecticut, two; Georgia, two; Illinois, two; Kentucky, two; Maryland, two; Rhode Island, two; West Virginia, two; Alabama, one; California, one; Michigan, one; Missouri, one; and Ohio, one.

Foreign countries represented in the enrollment and the number of students from each: Colombia, eight; Canada, seven; Mexico, six; India, five; Brazil, four; Japan, four; Turkey, four; Hongkong, three; Egypt, two; Iran, two; Norway, two; Peru, two; Switzerland, two; Australia, one; Costa Rica, one; England, one; Finland, one; Greece, one; Holland, one; Indonesia, one; Iraq, one; Israel, one; Nicaragua, one; San Salvador, one; and Uruguay, one.

## Council Completes Plans For Parley

Plans currently are being completed for the National Cotton Council's 15th annual meeting at Dallas, Tex., next Jan. 26-27, Harold A. Young, council president, announces. Mr. Young said that more than 700 representatives of the cotton industry and allied groups are expected to attend the council meeting, where industrywide programs in the fields of cotton research and promotion for 1953 will be mapped.

"A striking picture of change in the cotton industry's competitive position since the council's first annual meeting in Dallas in 1939 will be drawn for delegates attending the meeting," Mr. Young said. "At the time of that first meeting there were grave doubts as to the future of cotton. We



were burdened with the greatest surplus of cotton in the nation's history. Cotton was beginning to feel the full impact of competition from synthetic fibers. Our industry was disunited.

"With the Dallas meeting, however, there came the first steps toward a new unity of purpose and effort among all branches of the industry. We initiated our first programs aimed at increased consumption and greater markets for cotton. Since that time the history of the industry has been one of steady progress. Today domestic consumption of cotton has reached a level unheard of prior to 1939. The future of cotton is brighter than ever before."

During the Dallas meeting, delegates representing the nation's cotton farmers, ginnermen, warehousemen, merchants, spinners and cottonseed crushers will draw up 1953 programs in the fields of sales promotion, public relations, production and marketing, utilization research, and foreign trade.

"The cotton industry is confronted with knotty problems in all of its activities during the year ahead," Mr. Young said. "It is essential that we continue to consolidate our market gains and that we expand our efforts to win new customers for cotton and cottonseed products through programs designed to increase the quality of our products, lower our costs, and heighten our sales efforts."

Although the official dates of the council meeting are Jan. 26-27, Mr. Young said that a number of special committees and planning groups will be in session in Dallas for several days preceding the convention.

### List Wool Manufactures For August

Activity in the wool industry in August was considerably above that of July, according to the Bureau of the Census, Department of Commerce. Woolen and worsted looms op-

erated 1.9 million hours per week in August, 14 per cent above the July level. Carpet and rug looms were 92 per cent more active in August. The activity of woolen and worsted spinning spindles was up 20 per cent and 22 per cent, respectively, while worsted comb activity increased 24 per cent. All woolen and worsted machinery operated at about the same level as in August of 1951.

Consumption of apparel class raw wool on the woolen and worsted systems averaged 7.6 million pounds per week (scoured basis) in August. This was 21 per cent above July consumption and four per cent above consumption during August, 1951. Carpet wool was consumed at a rate of 2.3 million pounds per week in August, 77 per cent above July and 117 per cent above August, 1951.

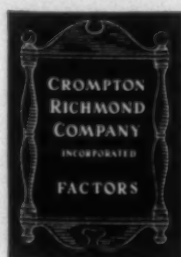
August weekly top output was up 23 per cent over July and seven per cent above the August, 1951, figure. August production of yarns other than carpet on the woolen and worsted systems was 20 per cent above July and one per cent above August, 1951, production. Carpet yarn production increased 80 per cent over July and was 43 per cent above production during August of last year.

### Veteran Textile Workers Cited In Alabama

Alabamians thrive on textile work, as shown by some unusual employment records recently compiled. That's the conclusion drawn, at least, by officials of the Alabama Cotton Manufacturers Association who have just completed a study of the continuous working records of employees in the state's textile mills. Those who have worked 25 or 30 years continuously in the same textile plant in the state are relative youngsters compared with many whose records were examined, said Dwight M. Wilhelm, executive vice-president of the association.

The survey was undertaken under the supervision of

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Robert K. Argo, personnel director of Alabama Mills, Inc., Birmingham, and chairman of the association's public relations committee, who had noted that usually the oldest workers in textile plants were held in exceptional esteem not only by the management but by their fellow workers as well.

Pat McGarvin, now a gateman at the Langdale Mill Division of West Point Mfg. Co., recently was crowned the oldest textile employee from the standpoint of continuous service in Alabama. He has worked continuously for the same mill for 65 years of his 73 years of life. But the newly-completed survey reveals that he is hard-pushed by a large group of others who cut their eye teeth in the textile field and are with it still.

Born in Troup County, Ga., near the scene of his long textile employment, Mr. McGarvin has witnessed striking advances in working and living conditions in this industry, he said. The industry has kept abreast of the progress of the state, he declared, and largely as a result of reinvestment of its money in modern machinery, plant rehabilitation, health and recreational facilities and numerous other projects designed for the progress of communities throughout the state.

Pushing Mr. McGarvin for oldest worker honors is John Thomas Breedlove, now an overhauler in the Shawmut Mill of West Point Mfg. Co., where he has worked steadily for 63 years. Ranking third is Ben F. Fincher, who has been employed continuously at Tallassee Mills since 1893. Close on his heels is an Anniston Mfg. Co. worker, Miss Ada Screws, who has worked for that Anniston mill for 65 years.

In Cordova, Henry Edward Barnett holds the title of oldest employee in the Cordova Division of Textron-Mississippi, Inc., having first started there on Jan. 1, 1898. He is a section man and card grinder. A record of 54 continuous years in the same plant is also boasted by Fletcher H. Turk, now a section man in the twisting department of the Standard-Coosa-Thatcher Co. plant at Piedmont. He began his employment April 1, 1898.

Here are others on Alabama's "Textile Honor Roll": Mrs. Rosa Smith, spinning department, Birmingham's Avondale Mill, 52 years. Mrs. Minnie Pierce, 52 years with Anniston Cordage Co., which she joined Aug. 13, 1900. Ben Dempsey, who helped build Opelika Mfg. Co.'s first mill in Opelika in 1901 when he was 16 years of age. Grover Peters, slubber tender on the first shift with Dwight Division of the Cone Mills Corp. in Alabama City, and who started with Dwight on Feb. 1, 1902. Mrs. Leila Graham Hanvey, with Adelaide Mills, Anniston, since January, 1904. Mrs. Rhett H. Davis, employee of Julia Cade Mills, Albertville, since 1904. Mrs. Daisy B. Hall, with Huntsville Mfg. Co. since Feb. 1, 1906. Miss Hattie Balentine, who began work as a weaver with Florence Cotton Mills, and is now a smash hand. Eugene C. Baird, 42 years with Russell Mfg. Co., Alexander City, which this year is observing its 50th anniversary. Mrs. Janie D. Stapleton, 40 years with California Cotton Mills at Uniontown.

This record is not complete, Mr. Wilhelm said, but it serves to indicate what seems to be an exceptionally strong attraction on the part of Alabama's textile industry for its workers, located in 52 different communities. It emphasizes, too, he added, the importance of Alabama and its employees to the national textile economy.

## Plan Exposition Of Basic Materials

An international exposition, the first of its kind held anywhere, planned to meet the needs of industrial "worlds of tomorrow," by presenting under one roof the whole range of new materials flowing from the laboratories of industry and needed for product development, was announced recently by Clapp & Poliak, Inc., New York.

Called Exposition of Basic Materials for Industry, and described as "a new link in our industrial communications system" by Don G. Mitchell, president, Sylvania Electric Products, Inc., who is chairman of the board of sponsors, the show will be held in New York, at Grand Central Palace, June 15-19, 1953. Top executives of 20 major companies are included in the sponsoring board.

Simultaneously with the exposition, a series of technical conferences will be conducted to discuss the properties and potentialities of the new materials which have such profound effect on both consumer products and industrial methods. The event is intended to create a new source of information and ideas for engineers, research scientists and executives by offering an integrated picture of the vast and complicated structure of materials fundamental to product development. With both conference and exhibits, the sessions are expected to provide the greatest clearing house for information about materials anywhere in the world.

More than 15,000 executives concerned with design and development of products are expected to attend from every major manufacturing center of the world. Almost 2,000 experts will be on hand to lead conference discussions and answer questions at exhibits.

Describing the exposition as one which will "open up the world of tomorrow for consumers everywhere," Mr. Mitchell declared that even large staffs of engineers are finding it impossible to keep abreast of vital new discoveries.

"New materials are being developed almost daily," Mr. Mitchell said. "A new textile designed to meet the needs of a tire manufacturer might find application in shoes, parachutes, furniture and packaging. A new plastic might find application in television sets, automobiles, toys and wall coverings.

"But it is not only consumer products which are undergoing change. Jet propulsion, atomic power and huge increases in the speed of mechanical production are presenting problems in industrial materials almost undreamed of in the 30s. What is needed is a quick exchange of information. At the exposition, under one roof, we can compare competitive claims, learn the peculiar properties of each and talk with hundreds of skilled men who can give us the knowledge we need so much. Meanwhile, at the conference, our product designers can learn of developments in prospect. It is a new link in our industrial communication system," Mr. Mitchell said.

Besides the emphasis on new materials, the exposition will demonstrate new uses for standard products, such as wood, metals, alloys, plastics, ceramics, textiles, leather, rubber, cork and glass. Product components and accessories will be featured. Also shown will be old materials in new forms such as laminations, coatings, combinations, and sandwiches. Both the exposition and conference will cut across

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industry lines to introduce the new products to the hundred different types of manufacturers in business today.

## Moisture Measuring Device For Rayon Slashers

Successful application of an electronic moisture-measuring device on rayon, acetate and synthetic yarn slashers was reported recently by the industrial division of Minneapolis-Honeywell Regulator Co. John D. MacNamara, textile industry sales manager, said that the device, known as a multi-range Moist-O-Graph and previously applied to cotton fibers, had during the past year been installed on more than a dozen multi-cylinder rayon slashers, in every case to the "complete satisfaction" of the mill operators. The device can easily increase production from a slasher by as much as 15 per cent, he said, effecting savings in one year equal to the cost of the installation.

Chief benefit from use of the moisture-measuring control is in making more uniform warps for the looms, he said. Mr. MacNamara explained that the more uniform the warp, the better it should weave. In addition to keeping moisture constant, the device also serves as monitor for the complete slashing operation. It detects variations in cylinder and size box temperatures and corrects for any variation. For example, if cylinder temperatures are too high or too low the Moist-O-Graph will cause the slasher to run faster or slower than the standard speed specified, alerting the operator.

An important feature of the new instrument is the availability of five separate ranges and a chart and scale calibrated in per cent of regain, two design features not found in earlier installations. The two improvements make possible the use of the instrument with all fibers and sizing materials, giving the operator a moisture reading in familiar terms.

The device was taken into New England mills for field tests and calibration. Moisture tests were run on acetate, viscose and nylon filament yarn, spun rayon, worsted and worsted rayon blends, sized with gelatin, Stymer and starch sizes.

## International Test Methods For Colorfastness

Marked progress in the development of international test methods pertaining to various aspects of colorfastness on textiles resulted from a three-day conference in New York, Nov. 10-12. Textile specialists of six countries, including the U.S.A., took part in the discussions. The meetings, held at the headquarters of the American Standards Association,

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tion, were part of a project of the International Organization for Standardization underway since 1948. Representatives of the standards organizations of Canada, France, Germany, Switzerland, the United Kingdom and the United States, participated as members of an I.S.O. subcommittee concerned with the subject.

Agreement was reached on the general principles of the fastness tests and on specific test procedures. Test methods considered were of two types—those pertaining to colorfastness to processing treatments and those pertaining to fastness to use conditions. In the former group, test procedures for fastness to each of the following agencies were agreed upon: water, water spotting, sea water, rubbing, acid spotting, alkali spotting, carbonizing, peroxide bleaching, potting, mercerizing, stoving, soda-boiling, chlorination, chrome and metals in dye baths, and hypochlorite bleaching. Use tests considered included fastness to such items as perspiration, light, cross-dyeing and washing.

Two methods for colorfastness to light were considered. Of these, the daylight method was confirmed, but the carbon arc method, practiced largely in this country, was held over for further discussion. A test method for hand washing was agreed upon, but the severe laundry washing test is yet to be determined. Two "gray scales" were accepted for rating the magnitude of color changes in various tests. These scales consisted of five shades of gray—one scale for the evaluation of color loss and the other for the determination of the degree of staining or "bleeding" of colors onto white fabrics.

Test procedures for fastness to perspiration and cross-dyeing were held over for further consideration. The cross-dyeing test had been circulated to the group too recently to reach agreement on it, and test procedures for fastness to perspiration are to be restudied because of new research data. Dr. P. W. Cunliffe of the Society of Dyers & Colorists of Yorkshire, England, reported that investigations have revealed natural perspiration contains compounds not heretofore included in the artificial liquids used in tests. Histamine, an amino compound, is the principal property discovered. It is now realized that this compound, and any others discovered, will have to be introduced into the artificial test liquids to give results comparable to those produced by natural perspiration.

Completion of the standards and final agreement by all of the nations should occur within a year, Dr. William D. Appel of the National Bureau of Standards and chairman of the meeting, stated at the close of the sessions. He expressed satisfaction at the degree of unanimity reached by the group, in spite of the various points of view that had to be resolved. Revised drafts are now to be circulated to the member groups for consideration and ultimate approval at the next meeting.

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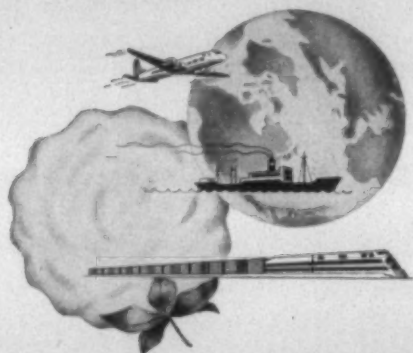
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### U. S. Free Trade Idea Paying Dividends

America's remedy for treating world textile trade ills—use of free enterprise methods to increase consumption in all lands—is already having its influence not only among textile industries overseas but also among some of the governments. This was a highlight of a report made recently by Robert T. Stevens, chairman of the American mission to the recent International Cotton Textile Conference in England.

Mr. Stevens told board members of the American Cotton Manufacturers Institute that the conference gave the first opportunity in textile history for putting forth a "blueprint" designed to accomplish maximum worldwide consumption of products and thereby increase world trade. The conference, made up of delegates from countries which now produce 90 per cent of all cotton textiles, formally accepted this principle, Mr. Stevens said, citing the efforts of the American delegation to put the idea across. In the short time since then evidence has been received, particularly from western European nations, that textile interests are responding encouragingly to the American suggestions.

Mr. Stevens reported that the U. S. delegates succeeded in gaining conference acceptance of the American stand against "any international action formal or informal, specific or implied, which would have for its purpose the restriction of distribution, the sharing of markets, or the imposition of any type of limitation which would be in restraint of the freedom of trade."

The American delegates, having set this course, took part in ten days of "intensive discussion of scores of facts and factors relating to international trade in cotton goods," Mr. Stevens said. "Under such circumstances it is reasonable to assume that each participating country, particularly those which depend so heavily on export markets, will be in a position to develop wiser and more orderly trade policies."

A supplementary report was made by William A. L. Sibley of Union, S. C., president of the American Cotton Manufacturers Institute, who as a member of the U. S. mission headed a special conference committee on ways and means of expanding cotton textile consumption. Mr. Sibley said the international parley was called to study problems arising from a situation that has seen world textile trade slump while productive facilities have increased, along with the rise of nationalistic governments which are pursuing aggressive export policies and at the same time are imposing import quotas and similar trade barriers. Not only from the point of view of our exports, which provide work for some 50,000 Americans and represent about eight per cent of American mill production, but also from the point of view of imports into the United States, the American manufacturers felt compelled to take part in the conference, Mr. Sibley said.

He and Mr. Stevens agreed that the U. S. mission had

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achieved an important objective in focusing the conference's attention on the need to enlarge world cotton consumption and away from agreements to divide, restrict or limit markets. "The need for more exports on the part of any country could better be satisfied by an enlargement of total requirements rather than ruinous competition for a diminishing total," Mr. Stevens said. "Consequently, the major theme of our position was the attainment of those things which would maximize world cotton consumption."

The total volume of world trade in textiles cannot be expected to expand in the near future, however, Mr. Stevens pointed out. He said the final conference report expressed belief that if 1953 trade equaled the volume of 1951, it would prove to be a good performance. "The close examination of all the facts undoubtedly had a very sober and beneficial effect on the thinking of the various countries," he commented. "It called attention in the most realistic fashion to the limited possibilities now available for each country and to the utter futility of trying to meet the problem by struggling for more of what is presently available. It pointed up the great damage being done to world trade by the universal network of restrictions and prohibitions."

"Recognition of this leaves no doubt as to the necessity of a combined attack on such restrictions. In the long range, it establishes the equal importance of economic policies and promotion programs designed to increase world trade and consumption."

Mr. Stevens expressed the mission's thanks to the National Cotton Council for the services of its director of sales promotion, Ed Lipscomb, who gave the conference an illustrated discussion of the council's promotion program. Howard Stovall of Stovall, Miss., a raw cotton expert, and Read P. Dunn, Jr., National Cotton Council foreign trade director, were special advisors.

### Worth Street To Be Improved

New York's Worth Street, acclaimed by many as the world's textile trading center, is due for a renovation. Floyd Jefferson, Sr., of Iselin-Jefferson Co., Inc., has been appointed to head the civic committee of Worth Street, Inc. The committee will seek to improve the Worth Street area generally by working with municipal authorities on street lighting, police protection, traffic problems, zoning laws and parking facilities. It also plans to aid in acquiring space or buildings for new companies wishing to enter the area. Members of the association serving with Mr. Jefferson include: Marvin R. Cross of Greenwood Mills, Inc.; Milton C. Mumford, Fieldcrest Division of Marshall Field & Co.; Durand Taylor, Durand Taylor Co., and George W. Walker, Neuss, Hesslein & Co., Inc.

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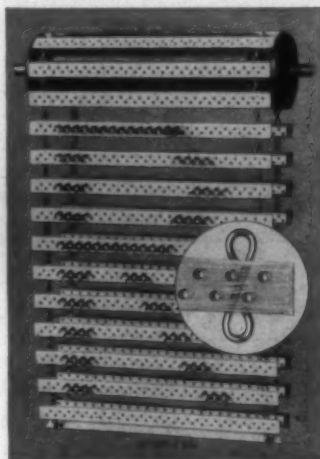
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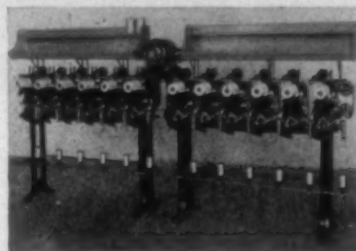
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Henderson, Box 133, Greer, S. C.; L. L. Froneberger, Jr., 533 Woodland Dr., Greensboro, N. C.; Ralph M. Briggs, Jr., 399 Lofton Rd., N.W., Atlanta, Ga.; Frank W. Beaver, Concord, N. C.; Bill Heacock, 315 Popular St., Sylacauga, Ala.; L. J. McCall, 536 E. Paris Rd., Greenville, S. C.

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**CURTIS & MARBLE MACHINE CO.**, Cambridge St., Worcester, Mass. Sou. Reprs.: Greenville, S. C., 1000 Woodside Bldg., W. F. Woodward, Tel. 2-7131; Dallas, Tex., O. T. Daniels, care Textile Supply Co.

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**NATIONAL ANILINE DIVISION**, Allied Chemical & Dye Corp., Gen. Office, 40 Rector St., New York 6, N. Y. Julian T. Chase, Res. Mgr.; Kenneth Mackinsie, Asst. to Res. Mgr., 201 W. First St., Charlotte, N. C. Salesmen: Wyss L. Barker and Harry L. Shinn, 201 W. First St., Charlotte, N. C.; Geo. A. Artpe and R. F. Morris, Jr., Jefferson Standard Bldg., Greensboro, N. C.; H. A. Rogers and Chas. A. Spratt, 1202 James Bldg., Chattanooga 2, Tenn.; J. K. Boykin, American Savings Bank Bldg., Atlanta, Ga.; W. H. Jackson, 213 Columbus Interstate Bldg., Columbus, Ga.; A. Jones, Jr., 408 Cotton Exchange Bldg., New Orleans, La.; Henry A. Cathey, 403 E. Franklin St., Room 210, Richmond, Va.

**NATIONAL RING TRAVELER CO.**, Philip C. Wentworth, Treas., 354 Pine St., Pawtucket, R. I. Sou. Office and Warehouse, 131 W. First St., Charlotte 1, N. C. Sou. Mgr., L. E. Taylor, Charlotte, N. C. Sou. Sales Engineers: Donald C. Creech, P. O. Box 1723, Charlotte, N. C.; Frank S. Beacham, P. O. Box 281, Honesah Path, S. C.; M. L. Johnson, 131 W. First St., Charlotte, N. C.

**NATIONAL STARCH PRODUCTS, INC.**, 270 Madison Ave., New York 16, N. Y. Sou. Repr.: National Starch Products, Inc., 194-210 Haynes St., N.W., Atlanta, Ga., Fred N. Eastwood; Howard Smith, 2025 Peachtree Rd., N.E., Atlanta, Ga.; Ira L. Dowdee, 1800 Sprague Ave., Charlotte, N. C.; Tom Griffin, 3706-A Skyline Dr., Chamblee, Ga.; D. R. Lassiter, 26 Jefferson Apt., Rockingham, N. C.

**NEW ENGLAND BOBBIN & SHUTTLE CO.**, 30 Crown St., Nashua, N. H. Sou. Repr.: Henry H. Hersey, Norwood Place, Greenville, S. C.; Harris Mfg. Co., 443 Stonewall St., S.W., P. O. Box 1982, Atlanta, Ga.; Charlotte Supply Co., Charlotte, N. C.

**N. Y. & N. J. LUBRICANT CO.**, 292 Madison Ave., New York, N. Y. Sou. Office and Warehouse: 634 S. Cedar St., Charlotte, N. C., Phone 3-7179; Lewis W. Thomason, Jr., Sou. Dist. Mgr., P. O. Box 576, Charlotte, N. C. Sales and Service Engineers: Fred W. Phillips, P. O. Box 782, Greenville, S. C.; James A. Sorrels, Jr., P. O. Box 576, Charlotte, N. C.; Fred Winecoff, Greensboro, N. C.; Aubrey M. Cowan, P. O. Box 563, Lanett, Ala. Warehouses: Charlotte, N. C.; Greensboro, N. C.; Greenville, S. C.; Atlanta, Ga.; Columbus Ga., Birmingham, Ala.

**NOBLE, ROY CO.**, P. O. Box 137, New Bedford, Mass. Sou. Repr.: John P. Batsen, P. O. Box 841, Greenville, S. C. Batsen Mfg. Co., Inc., Tel. 5-1634 or 2-5938.

**NORLANDER-YOUNG MACHINE CO.**, New Bedford, Mass. Sou. Plant, York Road, Gastonia, N. C.

**NORRIS BROS.**, Greenville, S. C.

**NORTH, INC.**, FRANK G., P. O. Box 123, Sta. A, Atlanta, Ga., Tel. Raymond 2199; P. O. Box 92, Marietta, Ga., Tel. 1509. Repr.: Chas. B. Elliott, Box 433, Griffin, Ga., Tel. 4014; Raymond J. Payne, Box 6000, Charlotte 7, N. C., Tel. 6-2025; A. V. McAllister, Box 324, Greenwood, S. C., Tel. 7668; J. C. Alexander, Box 56, Spartanburg, S. C., Tel. 5568; Frank G. North, Pres., and Mark W. Mayes, V-Pres., Atlanta, Ga.

**OAKITE PRODUCTS, INC.**, General Office: 22 Thames St., New York 6, N. Y. Sou. Div. Office: Oakite Products, Inc., 317 Palmer Bldg., Atlanta 3, Ga., W. A. Baltzell, Mgr. Sou. Repr.: G. Tatum, 2607 S. Court St., Montgomery 6, Ala.; H. W. Kole, 299 W. First St., Charlotte 2, N. C.; D. B. Lamb, 1133 Albert

St., Knoxville 17, Tenn.; L. T. Prince, 328 S. Davie St., Greensboro, N. C.; O. D. Riddle, Jr., 317 Palmer Bldg., Oakite Products, Inc., Atlanta 3, Ga.; P. W. Weldon, P. O. Box 976, Birmingham 1, Ala.; H. W. Hatley, 729 E. 53rd St., Savannah, Ga.; B. F. Swint, Lewis Village, P. O. Box 1271, Greenville, S. C.

**ODELL MILL SUPPLY CO.**, Greensboro, N. C.

**ONYX OIL & CHEMICAL CO.**, 115 Morris St., Jersey City 2, N. J. Sou. Mgr., Edwin W. Klump, 2437 Lucena Ave., Charlotte, N. C.

**ORB FELT & BLANKET CO., THE**, Piqua, Ohio. Sou. Repr.: Oliver D. Landis, Inc., 718 Queens Rd., Charlotte 7, N. C.

**FABST SALES CO.**, 221 N. LaSalle St., Chicago 1, Ill. Sou. Repr.: C. H. Patrick, P. O. Box 300, Salisbury, N. C., Phone 1066. Sou. Warehouse, Textile Warehouse Co., Greenville, S. C.

**PEASE & CO., J. N.**, 119½ E. Fifth St., Charlotte, N. C.

**PENICK & FORD, LTD., INC.**, 420 Lexington Ave., New York City: Ceda, Rapids, Iowa. P. G. Wear, Sou. Sales Mgr., 806 Bona Allen Bldg., Atlanta 3, Ga.; J. H. Almond, Glenn M. Anderson, W. J. Kirby, Atlanta Office: C. T. Lassiter, Greensboro, N. C.; Guy L. Morrison, L. C. Harmon, Jr., 902 Montgomery Bldg., Spartanburg, S. C.; T. H. Nelson, Charlotte, N. C.; W. R. Brown, 1214 Liberty National Bank Bldg., Dallas, Tex. Stocks carried at convenient points.

**PERFECTING SERVICE CO., THE**, 332 Atando Ave., Charlotte, N. C. Offices in Atlanta, Chicago, Cleveland, Philadelphia, Providence, New York, Montreal, and Toronto.

**PERKINS & SON, INC.**, B. F., Holyoke, Mass. John L. Perkins, III, Vice-President in Charge of Sales.

**PHILADELPHIA QUARTZ CO.**, Public Ledger Bldg., Philadelphia 6, Pa. Sou. Repr.: F. Homer Bell, 2624 Forest Way, N.E., Atlanta 5, Ga.; Richard D. Greenway, 1016 Guilford Rd., Charlotte, N. C. Textile Distributors: Southern States Chemical Co., Atlanta, Ga.; F. H. Ross & Co., Inc., Southern States Chemical Co., Charlotte, N. C.; Southern States Chemical Co., Greenville, S. C.; Marlow-Van Loan Corp., High Point, N. C.; Taylor Salt & Chemical Co., Norfolk, Va.

**PIEDMONT PROCESSING CO.**, Belmont, N. C. Tel. 352-353.

**PILOT LIFE INSURANCE CO.**, Jos. F. Freeman, Vice-President in Charge of Group Department, Greensboro, N. C.

**PIONEER HEDDLE & REED CO., INC.**, P. O. Box 116, Sta. A, 1374 Murphy Ave., S.W., Atlanta, Ga., Tel. Raymond 2136-2137. Repr.: Raymond J. Payne, Box 6000, Charlotte 7, N. C., Tel. 6-2025; J. Cantey Alexander, Box 56, Spartanburg, S. C., Tel. 5568; Charles B. Elliott, Box 433, Griffin, Ga., Tel. 4014; A. V. McAllister, Box 324, Greenwood, S. C., Tel. 7668, Mark W. Mayes, Pres. and Treas., Emile LeClair, V-Pres., Glee B. Thompson, Sec., Frederick M. Suchke, Plant Mgr., Atlanta, Ga., Tel. Raymond 2136.

**PNEUMAFIL CORP.**, 2516 Wilkinson Blvd., Charlotte, N. C. Sales Offices: Boston, Philadelphia, Atlanta.

**PRECISION GEAR & MACHINE CO.**, Charlotte, N. C.

**PROCTOR & SCHWARTZ, INC.**, 7th St. and Tabor Road, Philadelphia 20, Pa. Sou. Sales Office, Dryer Div.: 815 Johnston Bldg., Charlotte, N. C., Tel. 3-6697, John E. Schenck, Mgr.; Sales and Reclotting Branch, Textile Machinery Div.: P. O. Box 1361, Spartanburg, S. C., Tel. 6163, Joseph P. Christ, Mgr.

**PRUFCOAT LABORATORIES, INC.**, Main Office and Factory, 63 Main St., Cambridge 42, Mass. (Tel. Eliot 4-6200). Sales Office: 50 East 42nd St., New York 17, N. Y. (Tel. Murray Hill 2-2240). Repr.: Homer Arey, P. O. Box 541, Concord, N. C. (Tel. Concord 2-7211); A. B. Belmore, 155 Fern Ave., Collingswood, N. J. (Tel. Collingswood 5-4208R); Equipment Sales Corp., 1457 Bristol Highway, Kingsport, Tenn. (Tel. Kingsport 2740); McJunkin Corp., P. O. Box 513, Charlestown, West Virginia. (Tel. Charlestown 2-6144)

**RAGAN RING CO.**, Atlanta, Ga. N. C. Repr.: John H. Foard, Box 574, Newton, N. C.

**RAYBESTOS-MANHATTAN, INC.**, GENERAL ASBESTOS & RUBBER DIV., Passaic, N. J. Factory: North Charleston, S. C. Southern Distributors: Alabama—Teague Hdw. Co., Montgomery; Anniston Hdw. Co., Anniston; Long-Lewis Hdw. Co., Birmingham; Gadsden Hdw. Co., Gadsden. Georgia—American Mch. Supply Co., Atlanta; Bibb Supply Co., Macon. Kentucky—Graft-Pelle Co., Louisville. North Carolina—Charlotte Supply Co., Charlotte; Dillon Supply Co., Raleigh. Durham and Rocky Mount: Kester Mch. Co., Winston-Salem. High Point and Burlington. South Carolina—The Cameron & Barkley Co., Charleston; Carolina Supply Co., Greenville; Columbia Supply Co., Columbia; Montgomery & Crawford, Inc., Spartanburg; Sumter Mch. Co., Sumter; Tennessee—Chattanooga Belt & Sup. Co., Chattanooga; Summers Hdw. & Sup. Co., Johnson City; Power Equipment Co., Knoxville; Buford Bros., Inc., Nashville; Lewis Supply Co., Memphis. Virginia—Industrial Supply Corp., Richmond.

**REINER, INC.**, ROBERT, 550-64 Gregory Ave., Weehawken, N. J. Sou. Repr.: John Klinck, 304 W. Forest Ave., North Augusta, S. C. (Creels, Warpers and Beamers), and H. Walter Fricke, Box 9155, Charlotte, N. C. (Hosiery Machines).

**RHOADS & SONS, J. E.**, 35 N. Sixth St., Philadelphia 6, Pa. Sou. Offices: J. E. Rhoads & Sons, 88 Forsyth St., S.W., Atlanta, Ga., P. O. Box 4305. C. R. Mitchell, Mgr. Sou. Repr.: J. Warren Mitchell, P. O. Box 1539, Greenville, S. C.; A. S. Jay, P. O. Box 687, Sylacauga, Ala.; J. T. Hoffman, P. O. Box 4305, Atlanta, Ga.; L. H. Schwoebel, 615 Roslyn Rd., Winston-Salem, N. C.; Textile Supply Co., 301 N. Market St., Dallas, Tex.

**RICE DOBBY CHAIN CO.**, Millbury, Mass. Sou. Repr.: R. E. L. Holt, Jr., Associates, P. O. Box 1474, Jefferson Bldg., Greensboro, N. C.

**ROBERT & CO. ASSOCIATES**, Atlanta, Ga.

**ROSE & CO., E. F.**, Maiden, N. C.

**ROY & SON CO.**, B. S., Worcester, Mass. Sou. Office and Supply Depot: 1625 N. Tryon St., Charlotte, N. C., W. F. Crowder. Sou. Distributors: Odell Mill Supply Co., Greensboro, N. C.; Textile Mill Supply Co., Charlotte, N. C.; Textile Supply Co., Dallas, Tex.

**ROYCE CHEMICAL CO.**, Carlton Hill, N. J. Sou. Repr.: Irving J. Royce, 2008 Belvedere Ave., Charlotte, N. C.

**SACO-LOWELL SHOPS**, 60 Battery March St., Boston, Mass. Sou. Office and Supply Depot, Charlotte, N. C., J. W. Hubbard (in charge), H. M. Walsh, W. A. Thomason, Jr., Selling Agts.; Atlanta, Ga., 101 Marietta St., Herman J. Jones (in charge), Miles A. Comer, Selling Agts.; Greenville, S. C., Woodside Bldg., C. Perry Clanton (in charge), Chas. S. Smart, Jr., Selling Agts.



SANDOZ CHEMICAL WORKS, INC., 61 Van Dam St., New York 13, N. Y. Sou. Office: 1810-12 Camden Rd., Charlotte, N. C.; A. T. Hanes, Jr., Mgr.

SEYDEL-WOOLLEY & CO., 748 Rice St., N.W., Atlanta, Ga., Phone Elgin 5887, Vasser Woolley, Pres. Repr.: John R. Seydel, V. R. Mills, A. Dillon, Atlanta, Ga.; W. L. Whisnant, Concord, N. C.; W. H. Cutts, Greensboro, N. C.; Welling La Grone, Greenville, N. C., in the Wetting and Finishing Div.; Dr. Paul V. Seydel, David Meriwether, Atlanta, Ga.; J. E. Spearman, Charlotte, N. C. Northern and Export Repr.: Standard Mill Supply Co., 1064-1090 Main St., Pawtucket, R. I. (conditioning machinery and penetrants only). Southwest Repr.: O. T. Daniel, Textile Supply Co., 1602 Cedar Springs, Dallas, Tex.

SHERWIN-WILLIAMS CO., THE, Warehouse and Office: 224 W. First St., E. H. Steger, Mgr., Charlotte, N. C. Sou. Repr.: Guy C. Brazell, 231 Huron St., Decatur, Ga.; James E. East, 116 Tranquil Ave., Charlotte, N. C.; R. Eugene Roberts, P. O. Box 1302, Greensboro, N. C.; John W. Wheeler, P. O. Box 121, Greenville, S. C.

SIGNAL THREAD CO., INC., Chattanooga, Tenn.

SINCLAIR REFINING CO., Dist. Office, 573 W. Peachtree St., P. O. Box 1710, Atlanta, Ga., F. W. Schwettmann, Mgr., Lubricating Sales; O. R. Dyer, Mgr. Industrial Sales. Area Offices: Atlanta, Ga., Birmingham, Ala., Jacksonville, Fla., Miami, Fla., Tampa, Fla., Columbia, S. C., Charlotte, N. C., Nashville, Tenn., Jackson, Miss., Montgomery, Ala., Raleigh, N. C. Industrial Lubricating Engineers: J. M. Mathers, Columbia, S. C.; T. F. Morrison, Charlotte, N. C.; J. O. Holt, 1230 Dixie Trail, Raleigh, N. C.; W. H. Lipscomb, 414 Melver St., Greenville, S. C.; R. A. Smith, 121 Island Home Blvd., Knoxville, Tenn.; C. C. Nix, 1926 Sixteenth Ave., So., Birmingham, Ala.; T. A. Crossley, Montgomery, Ala.; L. M. Kay and H. G. Lane, 332 Eighth St., N.E., Atlanta, Ga., and H. H. Terrell, P. O. Box 131, Lakeland, Fla.

SINGLETON & SONS, RUSSELL A., Blanco, Tex. Sou. Repr.: R. T. Hamner, P. O. Box 267, Gastonia, N. C.; Ralph Gossett, Jr., Ralph Gossett Mill Supplies, 15 Augusta St., Greenville, S. C.; James W. Heacock, 609 Hillcrest Dr., Talladega, Ala.; Paul S. Jones, 208 Lane Circle, LaGrange, Ga.; Phil Morgan, 401 S. Lewis St., LaGrange, Ga.; Julian W. Still, 1708 Peachtree St., N.E., Apt. 20, Atlanta, Ga.

SIPP-EASTWOOD CORP., Main Office and Factory, 40 Keen St., Paterson, N. J. Sou. Office: S. Fred Toll, 2116 W. Morehead St., Charlotte, N. C.

SIRRIE CO., J. E., Greenville, S. C.

SNOWISS FUR CO., B., Lockhaven, Pa. Sou. Repr.: R. E. L. Holt, Jr., P. O. Box 1474, Jefferson Bldg., Greensboro, N. C. Tel. 2-5681 and 2-5438.

SOLVAY PROCESS DIVISION, ALLIED CHEMICAL & DYE CORP., 40 Rector St., New York, N. Y. Sou. Branch: 212 S. Tryon St., Charlotte, N. C.; H. W. Causey, Branch Mgr. Sou. Repr.: Earl H. Walker, High Point, N. C.; Richard Hoyt, 1216 Edgewood Ave., Jacksonville, Fla.; Robert P. Baynard, Charlotte, N. C.; Charles E. Varn, 307 Elmwood Dr., Greensboro, N. C.

SOMERVILLE-SEYBOLD DIVISION of HENLEY PAPER CO., 700 Murphy Ave., S.W., Atlanta, Ga.

SONOCO PRODUCTS CO., Hartsville, S. C.

SOUTHERN ELECTRIC SERVICE CO., Charlotte, Greensboro, N. C.; Greenville, Spartanburg, S. C.

SOUTHERN EQUIPMENT SALES CO., (N. C. Equipment Co.), Charlotte, N. C.

SOUTHERN SHUTTLES DIVISION, Steel Heddle Mfg. Co., Main Office and Plant, 2100 W. Allegheny Ave., Philadelphia, Pa. Greensboro Office, Guilford Bank Bldg., Box 1917, Greensboro, N. C.; C. W. Cain, Mgr.; Henry P. Goodwin, Sales and Service. Greenville Office and Plant, 621 E. McBee Ave., Box 1899, Greenville, S. C.; J. J. Kaufmann, Jr., V.-Pres. and Mgr. of Southern Divisions. Davis L. Batson and Sam Zimmermann, Jr., Sales and Service, Atlanta Office and Plant, 268 McDonough Blvd., Box 1496, Atlanta, Ga.; Southern Shuttle, a division of Steel Heddle Mfg. Co., 621 E. McBee Ave., Greenville, S. C.; J. J. Kaufmann, Jr., Mgr.

SOUTHERN TEXTILE WORKS, P. O. Box 406, 202 S. Towers St., Anderson, S. C.

STALEY MFG. CO., A. E., Decatur, Ill. Sou. Office, 1616 Rhodes-Haverty Bldg., Atlanta 3, Ga., W. N. Dulaney, Southeastern Mgr.; Dan S. Miller, Asst. Mgr. Sou. Repr.: H. Mitchell, Montgomery Bldg., Spartanburg, S. C.; W. T. O'Steen, Rt. 5, Greenville, S. C.; Donald A. Barnes, 456 Sedgewick Rd., Charlotte, N. C.; L. A. Dillon, 1616 Rhodes-Haverty Bldg., Atlanta, Ga.; Nelson N. Harte, Jr., 1616 Rhodes-Haverty Bldg., Atlanta 3, Ga.

STANDARD MILL SUPPLY, INC., 2319 Hutchison Ave., Charlotte, N. C. Charles A. Knutton, Jr., V.-Pres.; J. Kenneth Sumner, Sales Mgr.

STANLEY WORKS, THE, New Britain, Conn. Sales Repr.: G. H. Little, Harrison Bldg., Room 414, 4 S. 15th St., Philadelphia, Pa., Tel. Rittenhouse 9977; G. R. Douglas, 707 Columbian Mutual Towers, Memphis 15, Tenn., Tel. 8-7117; M. A. Hawkins, 3803 General Taylor St., New Orleans 15, La. Tel. Magnolia 5353; H. C. Jones, care The Stanley Sales Co., 410 Candler Bldg., Atlanta, Ga., Tel. Lamar 4651; G. J. McLernon, 209 Hubbard St., San Antonio 2, Tex., Tel. Travis 3653; Charles J. Turple, Jr., 1412 Scott Ave., Charlotte, N. C., Tel. 3-7015; J. A. Dickson, P. O. Box 390, 112 Sales Ave., Phone 9-2812, Chattanooga, Tenn.; T. P. West, Jr., 10 Seminole Dr., Greenville, S. C., Tel. 3-5932.

STEEL HEDDLE MFG. CO., Main Office and Plant, 2100 W. Allegheny Ave., Philadelphia, Pa. Greensboro Office, Guilford Bank Bldg., Box 1917, Greensboro, N. C.; C. W. Cain, Mgr.; Henry P. Goodwin, Sales and Service, Greenville Office and Plant, 621 E. McBee Ave., Box 1899, Greenville, S. C.; J. J. Kaufmann, Jr., V.-Pres. and Mgr. of Southern Divisions; Davis L. Batson and Sam Zimmermann, Jr., Sales and Service, Atlanta Office and Plant, 268 McDonough Blvd., Box 1496, Atlanta, Ga.; Southern Shuttles, a division of Steel Heddle Mfg. Co., 621 E. McBee Ave., Greenville, S. C.; J. J. Kaufmann, Jr., Mgr.

STEIN, HALL & CO., INC., 285 Madison Ave., New York N. Y. Charlotte Office: 1620 W. Morehead St., Charlotte, N. C.; F. W. Perry, Mgr., P.O. Box 809; N. C., Va. and Tenn. Repr.: W. S. Gilbert, Charlotte, N. C.; S. C. Repr.: Crawford H. Garren, P. O. Box 303, Pendleton, S. C.; Atlanta Office: 89 W. Peachtree Place, N. W., Atlanta, Ga.; E. D. Bates, Mgr., 1287 Durand Drive, N. W.; Ala. Repr.: J. E. Myrick, 262 24th St., Tuscaloosa, Ala.; Ga. Repr.: Rodney Simpson, 80 W. Peachtree Pl. N. W., Atlanta, Ga.

STERLING RING TRAVELER CO., 101 Lindsay St., Fall River, Mass. Sou.

Repr.: M. H. Cranford, 135 Walnut St., Chester, S. C.; D. R. Ivester, Clarksville, Ga.

TENNESSEE CORPORATION, 619 Grant Bldg., Atlanta, Ga., Tel. Walnut 4210. Sales Repr.: F. B. Porter, Sales Mgr., L. S. Kaniecki, J. A. Shamp, C. H. Bronson, W. E. Tiller, and D. E. Lee.

TERRELL MACHINE CO., THE, Charlotte, N. C. E. A. Terrell, Pres., W. S. Terrell, Sales Mgr.

TEXAS CO., THE, New York, N. Y. Dist. Offices, Box 961, Norfolk, Va., and Box 1722, Atlanta, Ga. Bulk Plants and Warehouses in all principal cities. Lubrication Engineers: P. C. Bogart, Norfolk, Va.; W. H. Goebel, Roanoke, Va.; P. M. Edwards, Raleigh, N. C.; W. F. Warner, Greensboro, N. C.; C. W. Meadows, Charlotte, N. C.; J. E. Buchanan, Munsey Bldg., Baltimore, Md.; J. H. Murfee, Greensboro, N. C.; G. B. Maupin, Greensboro, N. C.; C. T. Hardy, Durham, N. C.; H. E. Meunier, Charlotte, N. C.; S. L. Furches, Goldsboro, N. C.; A. C. Keiser, Jr., Birmingham, Ala.; F. A. Boykin, Jr., Birmingham, Ala.; J. B. Hatfield, Montgomery, Ala.; L. C. Mitchell, Atlanta, Ga.; J. M. Malone, Atlanta, Ga.; A. C. Evans, Macon, Ga.; J. S. Leonard, Greenville, S. C.; F. G. Mitchell, Columbia, S. C.

TEXTILE AFRON CO., East Point, Ga.

TEXTILE LABORATORIES, Box 1396, Gastonia, N. C.

TEXTILE SHOPS, THE, Spartanburg, S. C. E. J. Eaddy.

TIDE WATER ASSOCIATED OIL CO., 17 Battery Place, New York, N. Y. S. E. District Office, 3119 S. Blvd., Charlotte 3, N. C., K. M. Slocum, Dist. Mgr., Tel. Charlotte 2-3063. Sales Repr.: L. A. Watts, Jr., 407 N. Allen Ave., Richmond, Va. Tel. Richmond 4-8944; W. R. Harper, 1806 Madison Ave., Greensboro, N. C., Tel. Greensboro 8784; L. O. Compton, Jr., No. 1 Robinson St., Elizabeth Apts., Greenville, S. C.; Tel. Greenville 2-9322.

TODD-LONG PICKER AFRON CO., Gastonia, N. C.

TOWER IRON WORKS, 50 Borden St., Providence 3, R. I. Sou. Repr.: Ira L. Griffin & Sons, Charlotte 1, N. C., Tel. Charlotte 4-8306.

U S ROBBIN & SHUTTLE CO., Lawrence, Mass. Sou. Offices: Charlotte, N. C.; Greenville, S. C.; Johnson City, Tenn. Texas Repr.: O. T. Daniel, Textile Supply Co., Dallas, Tex.

U. S. RING TRAVELER CO., 159 Aborn St., Providence, R. I. Sou. Office and Sales Room: 1903 Augusta Rd., Greenville, S. C. Sou. Repr.: William P. Vaughan and Wm. H. Rose, P. O. Box 1048, Greenville, S. C.; Oliver B. Land, P. O. Box 1187, Athens, Ga.; Harold R. Fisher, P. O. Box 83, Concord, N. C.

UNITED STATES TESTING CO., INC., 1415 Park Ave., Hoboken, N. J. Sou. Branches: United States Testing Co., Inc., 198 S. Main St., Memphis, Tenn.; Tel. Memphis 38-1246, manager S. C. Mayne; 1700 Cotton Exchange Bldg., Dallas, Tex., Tel. Prosp. 2654.

UNIVERSAL WINDING CO., P. O. Box 1605, Providence 1, R. I. Sou. Offices: 1005 W. Morehead St., Charlotte, N. C. Agents: F. P. Barrie, H. H. Bucklin, Jr., and D. M. Dunlop, 907 Whitehead Bldg., Atlanta 3, Ga. Agents: J. W. Stribling and F. J. Barrows.

USTER CORP., Main Office, Charlotte, N. C.; 80 Boylston St., Boston 18, Mass.

VALENTINE CO., J. W., 612 S. Main St., Winston-Salem, N. C.; Box 278 Salem Station, Winston-Salem, N. C. T. Holt Haywood, Wachovia Bank & Trust Co. Bldg., Winston-Salem, N. C.

VEEDER-ROOT, INC., Hartford, Conn. Sou. Office, Room 231 W. Washington St., Greenville, S. C., Frank J. Swords, Sou. Dist. Mgr.

VICTOR RING TRAVELER CO., Providence, R. I., with Sou. Office and Sales Room at 358-364 W. Main Ave., P. O. Box 842, Gastonia, N. C. Phone 247. Also W. L. Hudson, Box 1313, Columbus, Ga.

WARWICK CHEMICAL CO., DIV. SUN CHEMICAL CORP. Main Office: 1010 44th Ave., Long Island City, N. Y. Sou. Plant: 907 White St., Rock Hill, S. C.; J. D. Snipes, Mgr. Sou. Repr.: M. M. McCann, Box 825, Burlington, N. C.; Minor Hunter, 1136 Skyland Rd., Charlotte, N. C.; H. Papini, E. R. Adair, Box 1207, Greenville, S. C.; W. E. Searcy, 425 Tilney Ave., Griffin, Ga.

WATSON & DESMOND, 301½ W. Fourth St., Charlotte 1, N. C. Repr.: John Wyatt, P. O. Box 701, Greensboro, N. C.; R. V. McPhail, 709 S. Jackson St., Gastonia, N. C.; A. J. Bahan and M. R. Woods, P. O. Drawer 779, Greenville, S. C.; Edgar A. Ball (Chemical Dept.), Charlotte, N. C.; H. K. Smith, P. O. Box 472, West Point, Ga.

WATSON & HART, 1001 E. Bessemer Ave., Goldsboro, N. C.

WATSON-WILLIAMS MFG. CO., Millbury, Mass. Sou. Repr.: John Wyatt, P. O. Box 701, Greensboro, N. C.; Arthur J. Bahan, P. O. Box Drawer 779, Greenville, S. C.

WEST POINT FOUNDRY & MACHINE CO., West Point, Ga.

WESTVACO CHEMICAL DIVISION, 161 East 42nd St., New York 17, N. Y. (Food Machinery & Chemical Corp.) Sou. Office: Liberty Life Bldg., Charlotte, N. C., Bishop F. Smith, Dist. Sales Mgr.

WHITIN MACHINE WORKS, Whitinsville, Mass. Sou. Office, Whitin Machine Works Office and Plant, Dowd Road, Charlotte, N. C.; R. I. Dalton, V.-Pres. and Sou. Agt.; Charlotte Repair Shop, Z. C. Childers, Sales Mgr.; Atlanta, Ga., Office, 1015 Healey Bldg., B. B. Peacock, Sou. Agt.; Spartanburg, S. C., 724 Montgomery Bldg., R. W. Dunn, Sou. Agt.

WHITINSVILLE SPINNING RING CO., Whitinsville, Mass. Sou. Repr.: William K. Shirley, 11 Wyuka St., Greenville, S. C.

# Before Closing Down

— TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED —

## PERSONAL NEWS



W. H. Suttentfield (*left*), vice-president of American & Efird Mills, Inc., Mount Holly, N. C., was elected president of the Durene Association of America at its recent annual meeting in New York. Arthur K. Johnson (*right*), vice-president of Dixie Mercerizing Co., Chattanooga, Tenn., was elected vice-president of the association. . . . Joseph P. Holt, president of Aberfoyle Mfg. Co., was re-elected treasurer of the association and A. C. Layton Newsom was reappointed executive secretary.



Ellison A. Smythe, who was Southern manager for H. & B. American Machine Co. until its dissolution some months ago, has joined the executive staff of Carolina Mills, Inc., at Dillon, S. C. Mr. Smythe formerly was associated

with his family in the operation of the textile mill at Balfour, N. C., which is now Berkeley Mills, Inc.

J. D. Brown, safety director of American

Enka Corp., Enka, N. C., has been named 1953 chairman of the Buncombe County Red Cross Chapter.

Albert Bowman is now overseer of carding and spinning at Arista Mills, Winston-Salem, N. C. Mr. Bowman's previous associations include Linwood Mills, LaFayette, Ga., and Cannon Mills, York, S. C.

Leon M. Ham, III, has been transferred to the Southern office of American Viscose Corp. at Charlotte, N. C., where he will work in staple sales. Mr. Hamm formerly was with the company's textile research department at Marcus Hook, Pa.

John R. Kimberly, president of Berkeley Mills, Inc., Balfour, N. C., has been named president of the Kimberly-Clark Corp. succeeding Ernst Mahler, retired. Mr. Kimberly continues as president of Berkeley.

W. A. L. Sibley, vice-president, secretary and treasurer of Monarch Mills, Union, S. C., and president of the American Cotton Manufacturers Institute, recently was elected president of the Palmetto Council of the Boy Scouts of America. Mr. Sibley holds the Silver Beaver award for outstanding service to scouting.

Ellison S. McKissick, president of Alice Mfg. Co., Easley, S. C., has been named to serve as one of the judges for the 1953 Maid of Cotton contest at Memphis, Tenn., Dec. 29-30.

Wilfred K. Wilson, formerly with Shawinigan Resins Corp., Springfield, Mass., has

been appointed a group leader in the research and development department of the Chemstrand Corp., Decatur, Ala. . . . Recently assigned new duties in the research and development department were the following: Dr. Alton E. Peacock, Paul W. Gann, Richard D. Radford and Calvin J. Waitkus.

B. William Whorton, formerly vice-president, has been elected president of Dixie Mills, Inc., LaGrange, Ga., and Forbes Bradley, previously vice-president and general manager of Columbus (Ga.) Mfg. Co., has been elected president at Columbus. Both plants are subsidiaries of West Point (Ga.) Mfg. Co. Joseph L. Lanier, president of West Point, who had served as president of the two plants, becomes chairman of the board. Mr. Lanier also was elected chairman of the board of Equinox Mill, Anderson, S. C., another West Point unit. . . . Henry B. Robinson, superintendent since 1936, was promoted to vice-president of Dixie Mills and Joe L. Jennings, executive vice-president of West Point, was named a director of both Dixie Mills and Columbus Mfg. Co. All other officers were re-elected.

C. B. Wall of Uniontown, Ala., is now overseer of carding at Magnolia (Miss.) Textiles, Inc.

M. R. Brice has been named division manager, industrial control sales, for Cutler-Hammer, Inc. He will have responsibility for the company's industrial control line. Mr. Brice joined the Cutler-Hammer engineering department in 1928, was transferred to headquarters sales in 1932 and in 1944 became a member of the St. Louis, Mo., district sales office. In 1946 he returned to headquarters in Milwaukee as an industry specialist.

Ralph G. Cox of Charlotte, N. C., has been appointed field sales representative in the Charlotte area for the fiber glass division of Libbey-Owens-Ford Glass Co., Toledo, Ohio. A native of Greensboro, N. C., and a graduate of North Carolina State College, Mr. Cox before joining L.O.F. was associated with Magnolia Petroleum Co., Beaumont, Tex., and Duke Power Co., Charlotte.

Reginald Garnsey, a vice-president of Courtaulds, Ltd., English textile firm, has been named to manage the firm's new \$10,000,000 rayon yarn plant at LeMoyne, Ala., near Mobile, which will be operated as Courtaulds (Alabama), Inc. Mr. Garnsey has been with Courtaulds since 1926 and previously managed the company's rayon filament plant in North Ireland.



S. Herschel Harris (*left*), formerly vice-president in charge of operations, recently was elected president of Standard-Coosa-Thatcher Co., Chattanooga, Tenn., at the annual meeting. He succeeds Richard C. Thatcher (*center*), president for the past 18 years, who was elected chairman of the board. Richard C. Thatcher, Jr. (*right*), was elected assistant vice-president. He was formerly thread sales manager. Roy E. Butler, formerly chief accountant, was elected assistant treasurer. . . . Re-elected officers are F. R. Harris, vice-president in charge of sales; S. M. Gamble, executive vice-president; C. W. Joiner, vice-president; A. H. Thatcher, treasurer; E. S. Davis, secretary; D. B. Barlow, assistant treasurer; C. B. Bennett, assistant treasurer. The following directors were also re-elected: D. B. Barlow, W. C. Cartinhour, J. A. Chambliss, S. M. Gamble, F. R. Harris, S. H. Harris, R. J. Mathewson, F. G. Miller, T. R. Preston, G. V. Strong, A. S. Thatcher, R. C. Thatcher, J. S. Verlenden.

## OBITUARIES

**Charles A. Buerk**, 67, president of Buffalo (N. Y.) Electro-Chemical Co., died Nov. 12 at a hospital in Chicago after a lengthy illness. Mr. Buerk pioneered in the development and introduction of hydrogen peroxide, particularly in the textile field. Surviving are his wife, a sister and a brother.

**William H. Hoch**, 66, a former executive of Whitin Machine Works and for many years associated with the Office of the Quartermaster General, died recently in Washington, D. C. Interment was made in Arlington National Cemetery.

**W. Troy McWhorter**, 49, of Charlotte, N. C., sales representative of the Calco Chemical Division, American Cyanamid Co., died Nov. 9 of a heart attack in Boston, Mass., where he had been attending the annual convention of the A.A.T.C.C. A graduate of Georgia Tech, Mr. McWhorter had been associated with Calco since 1936. Surviving are his wife and a sister.

**Russell S. Roeller**, 60, general sales manager of Pennsylvania Salt Mfg. Co., died Nov. 12 after a brief illness. Mr. Roeller recently completed 30 years with the firm, having joined it in 1922 as a salesman. His wife survives.

**John F. Tinsley**, president of Crompton & Knowles Loom Works, Worcester, Mass., died Nov. 18 in Worcester. Long a prominent New England manufacturer, Mr. Tinsley was well known in Southern textile circles where he had visited frequently.

**Lawrence A. Williamson**, 82, retired textile executive of Fayetteville, N. C., died recently after a lengthy illness. He began his textile career in 1899 in association with Walter L. Holt in the Holt-Morgan plant at Fayetteville. Later he was associated with textile plants in Wilmington and Saxapahaw, N. C., and until his retirement was a director of Holt-Williamson Mfg. Co., Fayetteville.

## MILL NEWS

**PICKENS, S. C.**—Alice Mfg. Co. of Easley, S. C., will begin construction about Jan. 1 of a new print-cloth plant near Pickens which will employ about 600 persons. The new mill will be located about a mile north of the Arial Plant of Alice Mfg. Co. at Alco Station on the Pickens Railroad. Completion is expected within about 12 months. Based on the Arial operation, the new plant is expected to utilize about 1,100 looms and 40,000 ring spindles.

**CLEVELAND, TENN.**—The Duplan Corp. recently announced plans for the erection of a 35,000 square foot, three-story addition to its plant here. Duplan purchased the existing plant for processing of nylon yarn from Cleveland Silk Mills in 1947.

**MOUNT HOLLY, N. C.**—The name of Fibre Products, Inc., has been changed to Holly Mills, Inc. The concern, a unit of American & Efird Mills, manufactures blended synthetic yarns and fabrics.

**RICHMOND, VA.**—Allied Chemical & Dye Corp. recently took an option on a 600-acre site near Richmond as a possible location for a multi-million dollar synthetic fiber plant. The site is on the James River in Chesterfield County. Allied officials estimated the proposed plant would cost \$23,165,000, according to a Certificate of Necessity received from the Defense Production Administration in July.

**GREENSBORO, N. C.**—Eight hundred twenty-five employees of Cone Mills Corp., with 25 years or more with the firm, were honored at separate banquets on the evenings of Nov. 21-22. One hundred twenty-six employees who have completed 25 years with the firm since last year's banquets were presented gold and blue pins bearing the Cone seal of 25 years' service.

**TALLADEGA, ALA.**—Agreement has been reached for the sale of Talladega Cotton Factory to Wehadkee Yarn Mills effective Dec. 1. Wehadkee officials state that the Talladega Cotton Factory will be operated by Wehadkee as the Talladega Mill Division.

A bore is a person who always talks when you want to.—*Tallahassee (Fla.) Democrat.*

## New Industrial Fungicide

The commercial availability of a new industrial fungicide for textiles and other materials was announced recently by Hercules Powder Co. The new preservative, Rosin Amine D Pentachlorophenate, has been subjected to an extensive four-year test program as a preservative for textiles and other materials which are susceptible to rot and decay. This research program has been a co-operative project of Hercules Powder Co. and Monsanto Chemical Co. Besides, various governmental and commercial laboratories have participated in the evaluation of Rosin Amine D Pentachlorophenate. Monsanto is the first licensee under the Hercules patents.

This new product is a reaction product of pentachlorophenol and Rosin Amine D, a primary amine manufactured by Hercules. In effect, Rosin Amine D enhances the fungicidal properties, decreases the vapor pressure, and makes unnecessary the use of high-cost auxiliary solvents and other special agents generally required with pentachlorophenol preservatives.

Rosin Amine D Pentachlorophenate, a resinous solid, is readily soluble in a wide range of oils and hydrocarbons and may be readily emulsified. It is used in concentrations of .3 to 1.5 per cent as a fungus preventative for textiles. It also has the advantage of being relatively non-irritating to the skin.

The widespread acceptance by industry of Rosin Amine D Pentachlorophenate has necessitated the construction of new and enlarged Rosin Amine D production facilities



**CHAMPION WORKERS HONORED**—Four employees with a total of 253 years of service received the personal congratulations of Governor Herman Talmadge of Georgia at a civic club luncheon held in connection with the West Point Mfg. Co. annual meeting recently at Lanett, Ala. Left to right: J. W. Hames, Kiwanis president; Governor Talmadge; Joseph L. Lanier, president of West Point, and Pat McGarvin, who has 65 years of service with West Point Mfg. Co. Other long-service employees include Judson Reeves, 65 years, only a couple of weeks back of Mr. McGarvin; Johnny Breedlove, 63 years, and Barlow H. Hawkins, 60 years. All are eligible for retirement, but they prefer to continue working.



## BEFORE CLOSING DOWN

at Hercules' Hattiesburg, Miss., plant. The new industrial fungicide is now commercially available in the form of solution and emulsion concentrates from qualified formulators licensed under patents held by Hercules.

## Allis-Chalmers Bulletin

Allis-Chalmers equipment for the textile industry is described in a new eight-page bulletin released by the company. Products covered include the company's new individual card drives and loom motors, in addition to Quick-Clean textile motors and other Allis-Chalmers motors for textile mill drives. Also mentioned are controls for textile motors, Texrope V-belt drive products, centrifugal pumps, dielectric heaters, electronic metal detectors, transformers, rotary compressors, steam turbine generator units, and water conditioning equipment. Copies of "Equipment for the Textile Industry," 25C7151C, are available upon request.

## Westinghouse Slasher Drive

A new packaged-type multi-motor slasher drive using magnetic amplifier control is available from the Westinghouse Electric Corp. This new drive is designed to provide high efficiency, reduced maintenance, and fine control of yarn tension during all phases of the slasher process. Complete operation is controlled by push-buttons and a speed-setting rheostat. To compensate for shrinkage or stretch, the tension between sections of the slasher can be changed during operation.

Excitation for the d-c generator and all of the d-c drive motors is furnished by a static selenium-type rectifier. The magnetic amplifier that regulates the beam motor to give constant winding tension consists of selenium rectifier stacks and wire-wound reactors.

The motor-generator set, selenium exciter, magnetic amplifier, booster generator, accelerating rheostat, and associated circuits are all enclosed in one gasketed, lint-tight cabinet that stands approximately 76 inches high, is 42 inches wide, and 25 inches deep. Ventilated air is cleaned by fiber glass filters at the intake, and the control compartment is pressurized to prevent seepage of size dust or lint into the control area.

The motor-generator set, booster set, and all motors have pre-lubricated, sealed ball-bearings to eliminate the possibility of contamination of the lubricant by lint or size dust, and to eliminate the necessity of a greasing schedule.

Uncontested winner of the cut glass fly swatter annually awarded for the most imaginative flight into pure fancy is Governor Dever of Massachusetts. He said the Fair Deal appeals to people because of its idealism and spirituality.—*Commercial Appeal*, Memphis, Tenn.

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